The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLV. CHICAGO, ILLINOIS, NOVEMBER 25, 1905. No. 22.

Original Articles

THE INFLUENCE OF CHRONIC PASSIVE CONGESTION AND CIRRHOSIS OF THE LIVER ON THE CONNECTIVE TISSUES OF THE SPLEEN.*

HENRY A. CHRISTIAN, M.D.

Instructor in Pathology and George Cheyne Shattuck Fellow Harvard Medical School; Assistant Visiting Pathologist, Boston City Hospital; Assistant Visiting Physician, Long Island Hospital.

BOSTON.

It is well known that in cases of cardiac disease which have caused chronic passive congestion of the abdominal viscera the spleen is usually firmer than normal, unless some complicating acute infectious process has produced an acute splenic tumor. Similarly with cirrhosis of the liver there is generally a firm spleen. In either case the spleen may or may not be larger than normal. The following questions arise in regard to the spleen under these conditions: With this increase in consistence is there an increase in the framework of the spleen? Is the change in the white fibrous and reticular tissue or in the elastic tissue? Is there any difference in the character and distribution of the connective tissues of the spleen in cases with chronic passive congestion or cirrhosis of the liver?

It was thought that these questions might be answered by the study of a series of such cases selected from the autopsy material at the Boston City Hospital since 1901. To be regarded as suitable for this purpose cases had to fulfill the following conditions: The patients must be adults; the autopsies must be made soon enough after death to furnish tissue in good condition for the staining methods used; the cases must be free from infectious processes leading to the production of an acute splenic tumor; and, finally, histologic examination of the liver must show well-marked lesions of chronic passive congestion or cirrhosis. Among 891 cases examined, 38 fulfilled these conditions. From them Zenker-fixed material was imbedded in paraffin, sec-

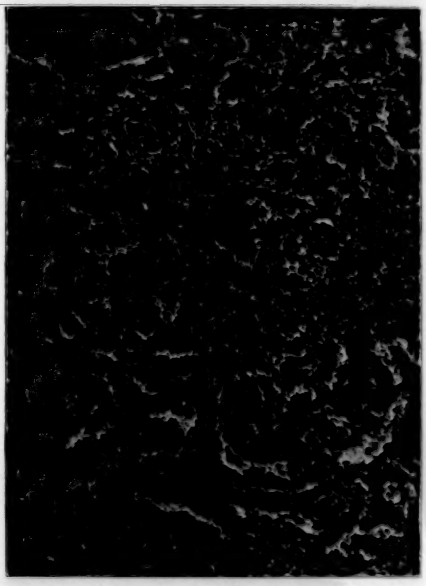

Fig. 1.—Chronic passive congestion. Spleen showing connective tissue increase (x 120 dia.).

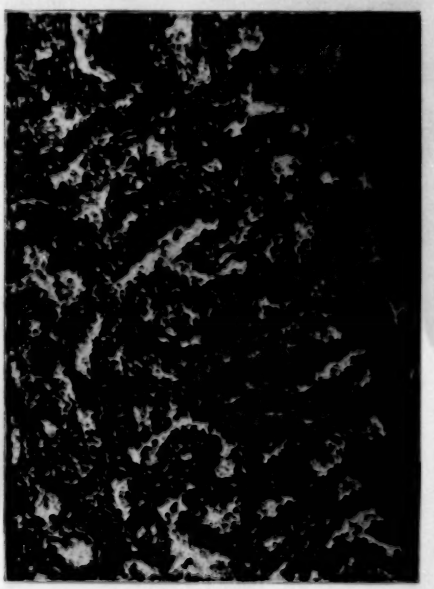

Fig. 2.—Chronic passive congestion. Spleen showing connective tissue increase in pulp (x 250 dia.).

* Read in the Section on Pathology and Physiology of the American Medical Association, at the Fifty-sixth Annual Session,

tioned, and stained with eosin and methylene blue, Mallory's anilin blue connective tissue stain, and Weigert's resorcin-fuchsin elastic tissue stain.*

In the 38 cases selected the livers show either well-marked cirrhosis of the multilobular or monolobular type (atrophic or Laennec's cirrhosis), or chronic passive congestion of an advanced degree. In the latter the central one-third to one-half of the liver lobule is congested with marked atrophy or total disappearance of liver cells. Fibrin thrombi occur frequently in the sinusoids, but do not dominate the picture in any case. In five cases the connective tissue about the central vein is increased in amount (moderate central cirrhosis. Of the cases of cirrhosis none shows a diffuse intralobular distribution of connective tissue (hypertrophic or Hanot's cirrhosis).

In the spleens no lesions of the Malpighian corpuscles occur, though there is some variation in their size. The pulp of the spleen in all cases is relatively poor in cells. The blood sinuses are generally dilated, distinctly demarcated, and usually are lined by a definite layer of low cuboidal endothelial cells. Between the blood sinuses lies a tissue made up of cells of the connective tissue and endothelial types, with a varying number of, rarely many, lymphoid and plasma cells and an occasional leucocyte. Sections with little or no connective tissue increase, as a rule, do not show the sharp distinction between blood sinuses and intervening cellular tissue, and here cells of the connective tissue type are not so prominent.

The anilin blue connective tissue method stains white fibrous and reticular tissue blue, but does not tinctorically distinguish the two. In the spleen the trabeculæ and walls of larger blood vessels contain white fibrous tissue appearing as bundles of straight or slightly wavy fibrils. Outside of this the supporting framework consists mainly of recticulum, a meshwork of blue-staining fibrils, slight in amount in the Malpighian corpuscles, more abundant in the pulp between the blood sinuses. About the blood sinuses are circular fibrils staining blue, which surround them at very regular intervals.

In the group of 38 cases studied, the white fibrous tissue of trabeculæ and blood vessels presents little or no change. In 10 cases the reticulum is not increased; in 28 it is present in increased amount. As seen in the table, the latter are divided into three groups; nine with considerable, eleven with moderate and eight with slight increase. Both the size and the number of the fibrils is increased.

Fig. 3.—Chronic passive congestion. Spleen showing absence of connective tissue increase in Malpighian corpuscle.

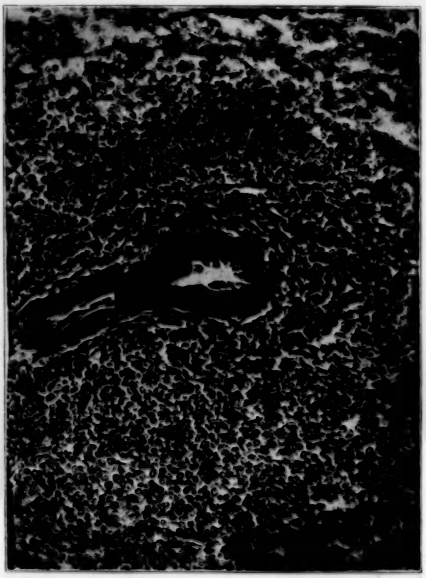

Fig. 4.—Cirrhosis of Liver. Spleen showing connective tissue increase about artery within Malpighian corpuscle.

In the cases of chronic passive congestion, the reticulum of the pulp is increased (Figs. 1 and 2), and there is little change within the Malpighian corpuscles (Fig. 3). In the cirrhosis cases there is a similar increase in pulp reticulum, to which is added an increase about the smaller splenic arteries and within the Malpighian corpuscles (Fig. 4), in cases in which there is a more marked connective tissue increase.

The increase in reticulum is sufficient to explain in part the increased firmness of the spleen under these conditions. The slight difference in its distribution in chronic passive congestion and cirrhosis may add some weight to the view that the changes in the spleen accompanying cirrhosis of the liver are only in part due to simple mechanical hindrance to its circulation.

The elastic tissue in the 38 cases, as demonstrated by the Weigert resorcin-fuchsin method, shows very little

* The technical methods employed here may be found described in Wright and Mallory's Pathological Technique, 3d edition, 1904.

change. Elastic tissue is present in the spleen in the capsule and trabeculæ in large amount, and also occurs in the walls of larger blood vessels, and to a slight degree extends from them out into the surrounding splenic tissue. Outside of these places practically none is found, though with overstaining, certain fibers about the sinuses are deeply tinted. However, careful differentiation with absolute alcohol separates these from the typically staining elastic tissue fibers. In a few cases there is a slight increase in the elastic tissue radiating from the blood vessels, but there is no difference in this respect between chronic passive congestion and cirrhosis cases.

No.	Wt. of Spleen.	Consistence.	Wt. of Liver.	Condition in Liver.
A. CONNECTIVE TISSUES OF SPLEEN NOT INCREASED.				
1	275	Firm	1,600	Chr. passive congestion.
2	90	Normal	1,420	Cirrhosis.
3	675	Firm	1,850	Chr. passive congestion.
4	150	Firm	2,490	Chr. passive congestion.
5	285	Firm	2,360	Chr. passive congestion.
6	140	Normal	1,080	Chr. passive congestion and central cirrhosis.
7	245	Firm	1,730	Chr. passive congestion.
8	130	Firm	2,150	Cirrhosis with fatty infiltration.
9	180	Soft	1,850	Cirrhosis with fatty infiltration.
10	180	Normal	2,580	Cirrhosis.
B. CONNECTIVE TISSUES OF SPLEEN SLIGHTLY INCREASED. (From this point cases are arranged in order of degree of connective tissue increase.)				
11	425	Firm	1,860	Cirrhosis.
12	420	Soft	1,750	Cirrhosis.
13	130	Normal	1,625	Chr. passive congestion.
14	170	Firm	1,850	Chr. passive congestion.
15	215	Fairly firm.	2,320	Chr. passive congestion.
16	315	Fairly firm.	1,385	Cirrhosis.
17	140	Firm	1,350	Cirrhosis.
18	200	Firm	1,630	Chr. passive congestion.
C. CONNECTIVE TISSUES OF SPLEEN MODERATELY INCREASED.				
19	620	Firm	720	Cirrhosis.
20	185	Firm	1,660	Chr. passive congestion.
21	905	Firm	985	Cirrhosis.
22	180	Firm	1,540	Chr. passive congestion.
23	190	Firm	1,670	Chr. passive congestion.
24	200	Firm	1,600	Chr. passive congestion and central cirrhosis.
25	175	Firm	2,420	Cirrhosis.
26	260	Firm	1,900	Chr. passive congestion.
27	175	Fairly soft.	3,440	Cirrhosis.
28	225	Firm	2,270	Chr. passive congestion and central cirrhosis.
29	150	Firm	1,860	Chr. passive congestion.
D. CONNECTIVE TISSUES OF SPLEEN CONSIDERABLY INCREASED.				
30	390	Firm	1,760	Cirrhosis.
31	235	Firm	1,430	Chr. passive congestion.
32	400	Firm	1,800	Cirrhosis.
33	155	Firm	1,080	Chr. passive congestion and central cirrhosis.
34	415	Firm	2,000	Chr. passive congestion and central cirrhosis.
35	45	Firm	910	Chr. passive congestion and central cirrhosis.
36	130	Firm	1,750	Cirrhosis.
37	105	Firm	1,400	Chr. passive congestion.
38	75	Firm	1,510	Chr. passive congestion.

SUMMARY.

1. In 38 cases of chronic passive congestion and cirrhosis of the liver, the spleen of 28 (73.6 per cent.) shows an increase in connective tissue framework. Some of the 10 cases with no increase in connective tissue are equally as firm; consequently the firm consistence in these is due to vascular distention rather than to connective tissue increase, and in all cases vascular distention probably plays an important part in producing the firm consistence.

2. The connective tissue increase is mainly a proliferation of the reticular tissue of the pulp with little or no change in the white fibrous and elastic tissue of the organ.

3. Some cases of cirrhosis show in addition to the proliferation in pulp reticulum, an increase in connective tissue about the smaller splenic arteries and within the Malpighian corpuscles.

ETIOLOGY OF PIGMENTOUS SARCOMA OF THE CHOROID.*

PROF. J. HIRSCHBERG.
BERLIN.

The cause of malignant tumors generally, and of the pigmentous sarcoma of the choroid especially, is a mystery to us. It is impossible to find one general cause for all of them. The reason, in my opinion, is that there are different causes in existence for different forms of the disease.

In 1882, I observed and published reports of two cases in which the monolateral congenital pigmentation formed the predisposition to the development of a melanotic sarcoma of the choroid.

The color of the iris in the healthy eye was grayish green; in the other dark brown, and the sclerotica of the dark eye contained around the cornea some large dark violent spots which were congenital according to the decided assertions of the patient.

In the one case, the eyeball was enucleated at once and showed a pigmentous sarcoma of the choroid. The melanoid spots of the sclerotica extended over the equator to the entrance of the optic nerve. They were composed of stretched but normal pigment cells.

In the other case, the affected eyeball had yet a tolerably good vision. Excision was performed two years later, as the vision had gone; seven years later the patient was in good health; nine years after excision death occurred, probably by metastasis.

In another group of cases, a congenital pigment spot in the iris was the cause of a pigmentous sarcoma of the same coat. I had two cases—one in the year 1868, in which excision of the eyeball was performed by my teacher, Albrecht von Graefe. I published a report[1] of the case in the *Archiv. f. Ophth.*, xiv, 3, 1868; it was the first case of melanotic sarcoma of the iris.

I observed the other patient in the year 1894, and operated by iridectomy. The microscope showed sarcoma. After nine years the patient was observed in perfect health, the eyeball blind, but quiet. The report of the case was published by my assistant, Dr. Fehr, last year, in the jubilee volume presented to me.

The third fact is a circumscribed pigment spot in the iris, causing a melanotic sarcoma in the same region of the ciliary body of the affected eyeball. This case is a new one, which I will now describe with some details:

Patient.—A woman, aged 33, presented herself May 2, 1905, with a letter stating that she was suffering from detachment of the retina of the right eye. Seven months previously she had observed that the eye was almost blind.

Examination.—I found the left eye entirely normal. The right one had only a very small eccentric visual field below the fixation point, and could only distinguish the finger at a distance of 35 cm. This eye was free of irritation and hypertension, but showed in the lateral octant of the greenish iris a large yellow-brown spot of trapezoid form, occupying the whole extent of the iris breadth. This spot was congenital, or at least noticed from the first childhood of the patient. Immediately behind the iris, in the same part of the eyeball, to the temporal side, a tumor was visible even by the naked eye of the observer. With focal illumination and the loop I detected a reddish-yellow sarcoma of that region with fine vessels on the surface and some pigment spots. Below the lens there was a dark neoplastic nodule. With the

*Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Before my report only a single case of that had been mentioned, but not discussed by Hulke, 1861, vol. iii, p. 280, Ophth. Reports Fr., "Sarcom der Uveal Tractus," 1882, p. 234, has a short remark about that subject, but the cases of Warren, Tay and Kipp, which he mentions, do not belong to this class.

ophthalmoscope the optic nerve entrance was visible, and very near to it a detachment of the retina.

Treatment.—As the diagnosis was self-evident, I proposed excision and performed it six days later, the home physicians of the patient having approved of my diagnosis and of the proposed treatment. A fortnight later the patient was discharged.

Pathologic Examination of Eyeball.—Now I come to the anatomic examination of the excised eyeball. The eyeball is

Figure 1.

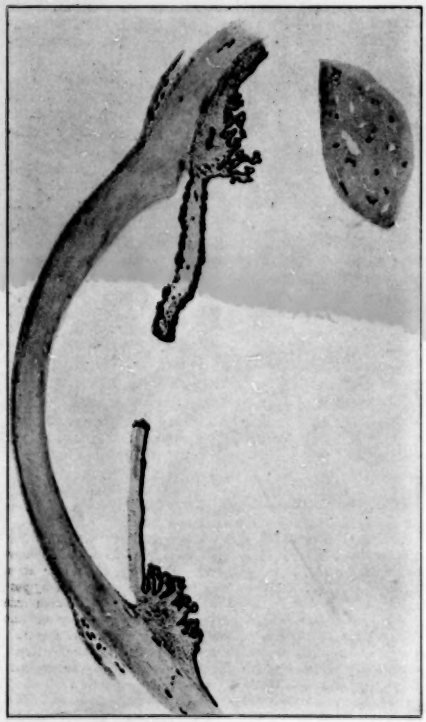

Figure 2.

divided by a horizontal section into an upper and a lower half. Figure 1 shows the lower half. Cornea, anterior chamber and lens seem normal. The iris stroma is bright in the nasal side, broader and brown in temporal side. The retina is completely detached. In the subretinal space a tumor of the size of a cherry appears, three-quarters of it being located in the lower half of the globe, one-quarter in the upper half. The cut surface is rather bright and shows several sections of blood vessels or spaces. The lower part of the tumor is not visible in this section, but it appears in a second horizontal division of the lower half of the globe. The tumor starts from the outer lower part of the ciliary body which here is thickened and converted into neoplasm. The middle part of the tumor is firmly adherent to the detached retina; between its posterior part and the retina there is an exudation coagulated by formol. The tumor is a sarcoma made up of small, round and spindle cells, the round cells prevailing; it is poor in pigment and rich in large vascular spaces with only capillary coats. Interstitial tissue is scanty. A fine connective coat surrounds the tumor and adheres to the retina, which also is converted into connective tissue.

In sections which correspond to the width of the pupil, as seen in Figure 2, the neoplasm is separated from its base or foot, but the ciliary body is thickened and interspersed with sarcomatous cells. Such cells are also visible in the wall and in the lumen of the canal of Schlemm.

The iris of the lateral half corresponding to the tumor is intensely pigmented. The yellow-brown pigment is situated in the superficial layer of the stroma, partially extracellular, partially in ramified chromatophore cells. The iris of the

Figure 3.

opposite side is free of pigment in the whole stroma and contains only the posterior pigment layer.

In the sections which approach to the lower pupillary margin the tumor gradually becomes in touch with the ciliary body (Fig. 3).

In the lower part of the lower half of the globe the whole ciliary body is converted into neoplasm to the root of the iris. This tumor of the ciliary body is spindle-shaped and its upper border perforates the boundary coat and grows freely and fungiform into the subretinal space.

For the microscopic preparations and the able drawings, I am indebted to my first assistant, Dr. Fehr.

We must agree that the tumor started from this part of the ciliary body which corresponds to the congenital nevus of the iris.

These facts are very striking; they are not mentioned in the very large and new book of F. Lagrange on tumors of the eye, but they agree with some other facts of the pathology, for instance, that congenital pigment nevi of the cutis, as life advances, are converted into melanotic tumors, and with the theory of Cohnheim that congenital peculiarities of cell groups or persistencies of embryonal germs constitute the real predisposition to later development of malignant tumors.

A CASE OF MELANOSARCOMA OF THE CHOROID.*

LEWIS H. TAYLOR, M.D.,
WILKESBARRE, PA.

I wish to report briefly a case of melanosarcoma of the choroid occurring in my practice, because of some of the interesting features connected therewith and the later metastasis to the liver and the death of the patient:

Patient.—Mrs. D., aged about 65, was first seen by me in consultation with her family physician Dec. 22, 1900. The patient was in bed suffering great pain with the left eye, which was much swollen and congested.

History.—Four days previously, in the early hours of the morning, her left eye became suddenly affected with very severe pressing pain. Her physician saw her at the time and during the following forenoon the severe pain passed away, but the eye remained uncomfortable and the sight was gone. The eye was not swollen but looked much the same as the other. When first seen by me it was greatly swollen, tension increased, the iris pushed forward, and the cornea steamy. Her physician had used atropia three times. This was discontinued as the eye was in complete condition of absolute glaucoma, from, as I supposed, intraocular hemorrhage. I changed to eserin. There was also some chemosis of the conjunctiva. Lead water and laudanum lotion was applied. On the following day the eye was more comfortable but very rigid, almost suggestive of panophthalmitis.

December 24 the condition was about the same but she had passed a comfortable night; three leeches had been applied. I went away for Christmas and returned late on December 26. On the 27th the condition had not improved, and I informed her husband and the family physician that, in my judgment, the eye should be enucleated at once, or within a very few days and suggested consultation.

The patient had had trouble with this eye three months before, in September, and came to my office during the meeting of the Pennsylvania State Medical Society and as I was not in she went to another oculist, who treated her a while with improvement and fitted her with glasses. Later she went to Philadelphia on a visit and while there was treated by Dr. J. T. Carpenter, who in reply to a letter of inquiry wrote me December 28 as follows:

"I saw Mrs. B. November 15, 1900, and her condition at that time was as follows: O. S. V. = fingers in limited area of temporal field. External appearance normal; tension normal. History of sudden blindness preceded by intensely brilliant phosphenes. Eye shows extensive retinal detachment, balloon-shaped, occupying almost the entire fundus with a narrow area in central upper nasal quadrant where retina is still attached and fundus appears normal. No tremulousness of retinal detached area on ocular movement. The normal portion of the retina shows refraction to be about Em. or low H. I could not make out the exact nature of the case but in absence of myopia considered the possibility of its being retinal separation of intraocular growth in the quiet stage. The possibility of an enormous retinal hemorrhage was also considered."

Operation.—At my request Dr. Carpenter came for consultation December 28, as did also Dr. Gloniger of Lebanon, Pa., a relative of the family. Both agreed with my expressed opinion that the eye should be enucleated. This I did at once, suturing the conjunctiva in the usual manner. On the following day there was no discharge but considerable swelling. I had probably closed the wound a little tighter than necessary. Under daily dressing this soon subsided and the wound healed kindly without any trouble.

Examination of Eye.—Dr. Carpenter took the eye to Philadelphia for examination and made a preliminary report January 5 as follows: "There is a heavily pigmented mass in the choroid which is very decidedly like sarcoma." Later he wrote: "The microscopic examination makes the diagnosis of the choroid only too evident. I have submitted the sections to Dr. Edward Shumway, who reports as follows:

"*Macroscopically.*—A densely pigmented mass found springing from the choroid, 12 mm. in height and 10 mm. in diameter at base. The retina is completely detached, the lens pushed forward, the subretinal space filled with albuminous exudate.

"*Microscopically.*—A densely pigmented mass found springing from the larger vessels of the choroid. Pigmented cells make up the main bulk of the tumor, they are round and spindle-shaped, the surface layers are infiltrated with blood, and the blood vessels of the growth are widely distended. The choroidal vessels, in common with the central retinal vessels and the posterior ciliary vessels show great thickening of walls, involving both adventitia and intima, the endothelial cells of the latter much proliferated. No structure is discernible in the retina which shows no connection with the choroid at the ora serrata. It is probable that the detachment is not of recent date. The optic nerve was found infiltrated with sarcoma cells which stain better than in the tumor itself. A large recent hemorrhage with corpuscles staining well is found beneath the retina and in the tumor itself.

"*Summary of Findings.*—Large densely pigmented sarcoma of the choroid showing extensive degenerative changes; detachment and degeneration of the retina; sarcomatous infiltration; and destruction of the optic nerve; intraocular hemorrhages; secondary glaucoma; cataract and pressure necrosis of iris, ciliary bodies and cornea."

Subsequent History.—This report naturally made us fear an early return of the trouble and gave a very unpromising outlook for the patient, as the experience of others would lead one to expect a return either in situ or in some other organ within a year. In spite of the infiltration of the optic nerve, there was no return of any growth in the orbit. The patient seemed to recover fully her general health, and during the rest of the winter and spring was very well.

I saw her a number of times and fitted the right eye with distance and near glasses, and she could read comfortably. She was somewhat nervous about the right eye, fearing it might also become affected, but it gave her no trouble. She went away during the summer and was fairly well, returned in the fall, and soon after noticed trouble in her right side. This progressed rapidly and she died of sarcoma of the liver Nov. 15, 1901. The orbit remained entirely free from any return of the sarcoma.

It is rather rare to have occasion to see and to diagnose a case of pigmented sarcoma of the choroid and afterward to confirm the diagnosis by microscopic examination. And yet a number of such have been reported. Frequently, as in the case above reported, the diagnosis is not made until the eye has been enucleated on account of hemorrhagic glaucoma. As to the return, the time varies greatly, but as stated above, it is likely to return either in the orbit or by metastasis to some other organ within a year or two.

Dr. Buller of Montreal reported a case to the American Ophthalmological Society some years ago of a return *in situ* after ten years. A very interesting summary of the subject of sarcoma of the choroid may be found in the Ophthalmic Year Book for 1905, by Drs. Jackson and de Schweinitz, who close by reference to Professor Hirschberg's work thus:

The most important contribution of the year to the question of recurrence in loco and metastasis after enucleation for choroidal sarcoma is by Professor Hirschberg. He records the statistics of 68 cases of sarcoma of the uveal tract seen between the year 1872 and 1903; of these 63 were in the choroid. Sixty-six enucleations were performed. There were no deaths from the primary operation. Local recurrence was observed only once, in which perforation had occurred before enucleation. In two out of six cases in which puncture of the eyeball for diagnosis was made previous to operation, there was a recurrence in the position of the conjunctival puncture, so that he advises against this procedure. Death occurred from metastasis in 16 cases, in 12 of these within two years. Of 41 cases that could be properly followed, one died from local recurrence, 2.5 per cent; 17 from metastasis, 41.5 per

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

cent.; and 23 remained healthy, 56 per cent. This is the best record of success thus far published. Of 47 cases in which anatomic examination was recorded, 35 were melanotic, 9 slightly pigmented, and 2 leucosarcomatous. He reports, finally, a case of metastasis to the liver nine years after enucleation of the eye ball, but considers this very exceptional, and believes that patients who remain healthy after four years should be considered permanently cured.

DISCUSSION

ON PAPERS OF DRS. TAYLOR AND HIRSCHBERG.

DR. DUDLEY S. REYNOLDS, Louisville, said that the chief point of interest, to his mind, is the time which may elapse after operation and recurrence of the disease. He recalled reporting a case of tumor of the iris to the International Medical Congress of 1876, at Philadelphia. In that case the neoplasm, being small, was removed by iridectomy. The patient had gone fourteen years after operation without any trouble whatever, until 1890, when he suffered from overwork, and then the eye became sensitive to light. In 1904 Dr. Reynolds saw this patient again, with the eye presenting an enormous mass, as large as the doubled fist, and the whole orbit and its contents, the lid, brow and part of the cheek, were all incorporated in the mass. He declined to do anything and the patient fell into the hands of a general surgeon, who scraped out the cavity of the orbit, and for five or six months the patient was going about, when suddenly he was seized with pneumonia and died. Postmortem showed that the liver, stomach and lungs had all fused together in one mass. This is an instance in which twenty-eight years elapsed before the fatal issue came. There are other similar cases in Dr. Reynolds' experience, and some in which but a few months elapsed. In the case of a child, ophthalmoscopic examination showed detachment of the retina, of circumscribed form, and the eye becoming painful, it was enucleated. Four months later the child came back with a malignant sarcoma, beginning above the brow and extending to the angle of the jaw. The case terminated fatally in a few weeks.

DR. JOHN E. WEEKS, New York, for facilitating the diagnosis of these intraorbital tumors, commended the lamp devised by Sachs of Vienna. All ophthalmologists have experienced the difficulty of determining the presence of a growth in the interior of the eye. With this lamp of Sachs the eye which does not contain a neoplasm or large foreign body can be transilluminated. The lamp may also be used for direct illumination and a retina that is so opaque that one can not see through it with the ophthalmoscope will be rendered transparent by this means. Dr. Weeks has recently experienced this difficulty in seeing an intraorbital tumor which came out clearly on use of the lamp. He thinks that the origin of the malignant sarcomata from pigmented nevi of the iris has been recognized for some time. It is very probable that sarcoma of the choroid, like sarcoma of the iris, develops in many cases from similar congenital pigmented spots in the choroid.

DR. KASPAR PISCHEL, San Francisco, showed specimens of sarcoma of the choroid. One patient he had under observation for four years refused operation until acute glaucoma with intense pain compelled him to have something done.

DR. L. H. TAYLOR said that he had no opportunity of examining his patient with the ophthalmoscope. He confirmed what Dr. Weeks said about the value of the Sachs lamp. He has one and uses it all the time.

PROF. J. HIRSCHBERG said that he has had good results with the Roentgen light in showing a tumor of the choroid in a particularly non-transparent eyeball.

Thoroughness should be vindicated in the work to which we have been called and by which we have to be judged. If we play a game, let us strive to play it well, and not be a "footy"; if we undertake a piece of work, let us finish it to the last jot and tittle. If we profess a subject of knowledge, let us have it at our finger ends. . . . There is honor for the man who can be trusted to the end and whose work does not need to be done over again, who can always be found in his own place, and will always do what is expected of him. There is continual dishonor for the person who is slipshod and unreliable, and fickle and lazy, for he is like the reed which pierces the hand that leans on it.—Ian Maclaren in "Homely Virtues."

SOME OBSERVATIONS ON TREATMENT OF YELLOW FEVER.

L. SEXTON, M.D.

NEW ORLEANS.

While prophylaxis is the step most important to any community threatened with yellow fever, we must do something for the patient who already has the disease, and, to those inexperienced in the management of cases, this is really the most interesting viewpoint of the subject. All that we can do in some cases often comes to naught, as in patients who seem to be overwhelmed by the virulence of the poison from the very start, with marked congestion in the algid condition, which may soon be followed by anuria, feeble, rapid pulse and death. There is also another class of cases in which, either from the small amount of poison injected by the mosquito into the patient, or the splendid eliminating powers of the organs, the toxin seems to be thrown off with such rapidity that it is hardly necessary to aid Nature in the fight. These two opposite conditions in patients have produced a school of therapeutic nihilists in the treatment of yellow fever, which is very much to be regretted, because, for the patient occupying the middle ground between the two extremes just mentioned, there is a great deal to be done to conduct him to a comfortable and safe recovery.

In treating yellow-fever subjects, the constitution of the patient has a great deal to do with the plan pursued. For instance, the plethoric, strong-bodied young person with high fever may take with benefit one 5-grain dose of acetanilid or phenacetin and may use ice caps to back and front of head; whereas for a delicate or weak subject, or one in the algid stage, we who treat yellow fever in New Orleans would not allow even one dose of any of the coal tar derivatives or any ice application whatsoever. The majority of physicians advise against the use of any of the coal-tar derivatives in the treatment of yellow fever. We agree with this treatment for patients with weak hearts, but in the robust, plethoric cases mentioned above, with a temperature of 106 F. maintained for some time, it is more damaging to the patient than would be a single dose of acetanilid or phenacetin, which not only reduces the fever, but quiets the backache and headache, which is characteristic of this fever.

THE HOT BATH.

As a rule, we prefer the hot foot bath treatment, of one hour duration following the initial chill. During the bath the patient is to be snugly covered with light blankets to retain the steam arising from the hot water; and, to encourage the elimination by the skin, hot toweling, with hot drinks and alcohol rubs, should follow the bath to keep the pores of the skin open. If the majority of the physicians who have had experience were asked to state their preference, between the hot and the cold treatment of yellow fever, a great many would say that they prefer the hot method. The hot foot bath has become so universally recognized in tropical climates that we usually find this part of the treatment under way on our first visit to a yellow-fever case. Perspiration may be often augmented by hot lemonade, orange leaf or other tea, which, in addition to increasing perspiration, exerts a stimulating action on the kidneys, which is so much to be desired in treating yellow-fever subjects. In a hot climate, in the midst of summer with a temperature of 105 F., a hot mustard foot bath with warm blankets and still warmer drinks, is not a

position to covet, but in its final results or benefit to the patient, it has been found to be more efficacious than the experience with Kibbie and his ice cot. In fact, the only three ways in which ice is to be used in the treatment of yellow fever are in crushed ice to allay vomiting and to quench the thirst; ice bags under and on the head in hot fever and on the stomach to allay vomiting where hemorrhage is suspected. When used on the stomach several folds of flannel intervening prevent the chilling and absorb the moisture from the ice bag.

TREATMENT OF BOWELS.

Elimination by the bowels is just as important as that by the skin, so it is in order to begin the treatment by an agreeable saline cathartic, such as citrate of magnesia, Seidlitz or any effervescing agreeable salts to suit the patient's taste, as we do not wish to disturb or unsettle the stomach at this time. Many physicians prefer an initial dose of calomel and soda, 2½ grains each, followed by some purgative mineral water; this calomel treatment is best suited to subjects who are naturally bilious. Quick flushing of the bowels is what is required, so an enema, or glycerin suppository is ordered if there is any tardy action of the bowels. This flushing must be kept up by enemas, or suppositories daily, as there is a great tendency to the formation of gas in the bowels in all yellow-fever patients. The proper initial purge to be used depends largely on the patient; equally good results seem to have been obtained from calomel in one or broken doses, and from the different saline purgatives rendered agreeable, as no nauseating drug or pills should ever be given to add fuel to the smoldering inflammation already in the stomach, hence citrate of magnesia, the effervescent salts of phosphate of sodium, the charged saline mineral waters to which the patient's taste is accustomed should follow up the initial dose of calomel in about four hours, until from two to four good movements of the bowels have been accomplished.

TREATMENT OF STOMACH.

The stomach is the next organ on which the ravages of the poison seem to exert special virulence. On postmortem, the mucous lining of the stomach is found to be softened and very congested, showing the impossibility of its functioning. It is harmful in severe cases to put either food to be digested or medicines to be absorbed into a stomach whose gastric and mucous follicles, peptic glands, nerve loops and capillary blood vessels are all undergoing changes incident to violent inflammation; hence the necessity of keeping the stomach absolutely empty from three to five days at the beginning of the fever. If an attack comes on after a hearty meal and there are indigestible substances in the stomach, they should be washed out or emptied by a mild emetic, such as hot salt water, or simple hot water until the stomach is distended; then the fauces should be titillated until the stomach is emptied; this aids in producing perspiration and starts the case out with a clean stomach, which is one of the principal organs attacked later on in the disease, and is, consequently, no little advantage.

The best plan to pursue in all cases is absolute starvation from three to five days, just as if the mouth were sewed up, with the exception of drinking water. The best treatment for nausea and vomiting (which is a very persistent symptom) is to use small particles of crushed ice with one-eighth of a grain of cocain occasionally, iced champagne for those accustomed to drink, mustard plasters and ice bag applied over the stomach, provided there is a tendency to hemorrhage. The cocain may be repeated as suppository two or three hours apart until nausea and vomiting are stopped. In some cases tablespoonful doses of milk of magnesia and cream of bismuth with peppermint water in equal parts, assist in allaying the acidity and removing the gases in the stomach. Pressure on the heart from these gases through the diaphragm produces the most disagreeable symptoms, which are sometimes met in treating yellow fever. Bicarbonate of soda is occasionally added to the above prescription when this acidity is continuous. All the resources of the expert are needed to allay an irritable stomach.

TREATMENT OF SUPPRESSION OF URINE.

The way to prevent anuria, from which most subjects die, is to keep the kidneys functioning by water diuresis. What goes in must come out, so water given regularly every hour or two, while the patient is awake and has high fever, is not only very grateful to the patient, but keeps the kidney acting. The water may be charged, alkaline or plain, iced or hot, just to suit the patient, but it must be given with the regularity of medicine to have the desired results. Watermelon seed or orange leaf tea are common remedies among the Creole population of New Orleans. Lithia tablets may be added to the water or mineral springs water of proven diuretic value may be used, but, after all, it is more in the quantity than in the chemistry of the water. This water should be repeated often, but not in large quantities, if nausea be present. High hot water enemas, or a literal warm bath for the kidneys through the rectum, or hot turpentine applications to the spine or abdomen are all recommended by experienced practitioners.

Others have suggested one-grain doses of calomel one hour apart until the kidneys and bowels act, while some have recommended half-pint doses of champagne. Any one who has examined a yellow-fever kidney postmortem with its epithelial and inflammatory degeneration, its blocked, uriniferous tubules filled with débris and toxin products, will know the necessity of washing them out with the vis-a-tergo or abundant water treatment. The condition is a desperate one, hence the multiplicity of remedies and suggestions, all of which frequently have failed.

TREATMENT OF THE HEART.

Yellow fever is a germ or toxin poisoning circulating in the blood, which profoundly depresses the heart's action. The pulse may drop to 50 or 60 beats per minute. After the first two or three days remember the recumbent position is imperative during the existence of this depression. The patient should not exert himself, even to turning in bed. Water and liquid nourishment should be taken out of ideal glass, sick cup, or through a bent tube, so that not even the head is raised in the effort of drinking. The patient should be given 1/60 grain of strychnin hypodermically with caffein to stimulate the heart during this weakened period, when necessary.

As said before, the poison of yellow fever is a powerful toxin circulating in the blood whose main ravages are exerted on the liver, resulting in jaundice, on the stomach, producing pain, nausea and hemorrhage in severe cases; on the kidneys, causing nephritis, hence the albuminuria, uremia; and on the heart, slowing and weakening its action, so that the ratio between the pulse rate and temperature is lost, giving 106 F. temperature with a 70 or 80 pulse beat per minute. Any toxin that is capable of working any or all of these ravages is a powerful factor with which to deal, and any one who views it lightly is either reckless or not experienced in its management.

COMPLICATIONS WITH MALARIA AND DENGUE.

Yellow fever is certainly intimately connected with malaria in many cases, in that it occurs in the patient at the same time and in tropical climates; has the same intermediate host (the mosquito); begins with a chill, head and lumbar pains, so that the first twenty-four hours of the two diseases run in parallel lines in many cases. On this account, whenever the malarial plasmodium is found in the blood examination, 20 grains of quinin has been given with advantage by enema during the first twenty-four hours of the fever. It is not considered safe to give it by the stomach in capsule form, but its action in eliminating the malarial element is just as positive as in uncomplicated malaria. It has been observed by clinicians that nearly every outbreak of yellow fever has been preceded or intermixed with dengue fever. Whether the so-called dengue is another name for mild yellow fever, I will not attempt to discuss here, but will state that the last three epidemics of yellow fever in New Oreans and contiguous territory have been so mild in some patients that many families, thinking it dengue, risked treating themselves, rather than to call in a physician and to undergo the temporary inconvenience of screening and fumigation incident to yellow-fever cases. Many of these mild untreated yellow-fever patients spread the disease and reproduced the severer forms of fever in localities where its origin could not be otherwise traced.

DIET.

During convalescence the liquid nourishment, such as alimentary elixir, milk and lime water, strained soups, barley water, egg albumin, may be administered prudently, but only in tablespoonful doses at the time, and an hour or two apart, until convalescence is well established. All of these articles of diet are to be stopped if disagreeable symptoms supervene.

With Dr. Sternberger's bichlorid of mercury treatment, we have had no personal experience.

This article is intended to deal only with some of the more prominent symptoms and treatment of yellow fever. There are many little details of nursing and nourishing in the convalescent stage that the tact of the nurse and the physician will discover in the progress of the case. What is here recommended is a sort of résumé (consensus) of general methods and treatment usually in vogue by the active practitioners during the last three outbreaks in New Orleans.

POSTOPERATIVE PELVIC EXUDATES.*

W. FRANCIS B. WAKEFIELD, M.D.
SAN FRANCISCO.

Anyone who takes the trouble to investigate this subject carefully will be surprised at the frequency of a postoperative exudate as a sequel to surgical procedures for the relief of the various pathologic conditions which may be found within the female pelvis, due to past or present inflammation.

Let these conditions be what they may—pyosalpinx, hydrosalpinx, or hematosalpinx, ovarian cystomata, hematomata or abscesses, neoplasms of the uterus or periuterine structures associated with degenerative or inflammatory changes—if they produce an exudation which results in the formation of abnormal adhesions, if they bring about hyperplastic changes in the pelvic connective tissue structures, or if they are responsible for an embarrassed pelvic circulation with passive hyperemia, edema or venous varicosity, they may easily lay the foundation for future postoperative exudates.

Although theoretically recognizing the possibility of postoperative pelvic exudates, the question had not assumed practical importance to me until three years ago, when a patient, a few months after having been operated on for bilateral pyosalpinx, returned to me complaining of pelvic discomfort and on examination I was surprised to find a firm, slightly fluctuating mass, the size of an orange, on the left side. Under appropriate general and local treatment the mass entirely disappeared in a few weeks and has not returned since. During the time it was present in the pelvis it produced symptoms almost as severe as the original condition.

Since that time I have made a systematic study of the postoperative local conditions of the patients on whom I have operated for the results of pelvic inflammatory disease. The outcome of this methodical research leads me to the conclusion that postoperative exudates or indurations may be found, to greater or less extent, in about 60 per cent. of the patients on whom we operate for the purpose of relieving the various pathologic conditions produced by severe inflammatory disturbance.

While our patient lies in bed after the operation, and, in fact, up to the time she leaves the hospital, these postoperative tumefactions are rarely observed. It is after the patient begins to lead a more active existence and gradually takes up her general duties, with the increased physical exercise which such duties demand, that these exudates begin to give evidence of their existence. The patient will feel a sense of weight and ill-defined discomfort amounting sometimes almost to pain, on one side or the other, or on both, reflected up around the brim of the pelvis on the affected side, and on examination a more or less pronounced thickening or tumefaction will be found. In general character these tumefactions vary greatly. Sometimes one observes simply an edematous thickening of the broad ligament structures; at other times hard indurations of variable size, from that of an egg to that of a large lemon; again, semi-fluctuating tumors which often are as large as a cocoanut, almost filling the pelvis and pushing the uterus toward the opposite pelvic wall.

In this paper I exclude from the discussion those septic exudates of streptococcic or other pyogenic origin which may occur shortly after an operation and which are accompanied by elevation of temperature, increase in the pulse rhythm, and the other symptoms of a septic state.

In view of the frequency and importance of these non-septic exudates, one would naturally expect a rich literature on the subject. In this expectation, however, one meets with disappointment. Our literature is almost silent on the question. I have been able to find only two or three allusions to the subject in our American literature of recent years.

In the discussion of a paper read before the Chicago Gynecological Society, March 17, 1899, by G. A. Kletzsch on "Remote Postoperative Pelvic Conditions and Their Symptoms, with Report of Cases," Thomas J. Watkins calls attention to postoperative exudates, and attributes the symptoms of one or two of Kletzsch's reported cases to this cause, in which opinion I concur.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

The possibility of postoperative exudates is also vaguely suggested by J. Riddle Goffe in a paper read before the American Gynecological Society last year under the title of "The Value of Postoperative Local Treatment in Gynecology," and a direct allusion is made to this subject by George Tucker Harrison in an article entitled, "Conservative Treatment of Affections of the Uterine Adnexa, Its Indications and Limitations," which was read before the Virginia State Medical Society at its thirty-fifth annual meeting. In this article Harrison speaks of "intrapelvic pains due to exudation about the stump."

One wonders whether these exudates have not been generally observed, or whether, having been observed, they were regarded as being relatively unimportant. I regard them as being of extreme importance, and can positively assert, from personal experience, that failure on the part of the gynecologist to recognize early and to treat appropriately these mechanical exudates until they have disappeared, will often result in a state of invalidism quite as pronounced as that which existed prior to operation. This being so, a responsibility rests on us, and I think Goffe's plea for postoperative local treatment in gynecology is well timed.

The pathology of these exudations and indurations seems to me to be simple. I have never subjected any of these patients to any secondary operative procedures, so have, therefore, had no opportunity to make a histologic study of the composition of these pelvic tumefactions. A thoughtful review, however, of the conditions existent in the pelvis after an operation enables one to arrive at a very clear conception of the method of formation of these mechanical entities. Let us suppose we have operated on a patient whose pelvis is the seat of a bilateral pyosalpinx with adhesions. We have performed a bilateral salpingo-oöphorectomy, after having broken up the surrounding adhesions. We have covered up the raw surfaces with peritoneum as best we could, and closed up the abdominal wound. In the pelvis thus operated on there will exist the following local conditions:

1. A break in the arterio-venous circle, caused by the ligation of the ovarian artery and vein, which demands the establishment of a collateral circulation.

2. A deposit of embryologic connective tissue in and around the sites of surgical trauma.

3. An edematous, hyperplastic condition of the pelvic connective tissue as a result of long-continued association with chronically inflamed viscera.

4. Adhesions may tie the pelvic viscera together or to contiguous abdominal viscera.

A careful review of these statements gives us ground for a logical hypothesis concerning the pathology of the postoperative mechanical tumefactions under consideration—the so-called exudates. The first two factors supply the cause; the last two simply intensify the first. It is easy to appreciate how hyperplasia of the pelvic connective tissue, by irritating pressure, and adhesions, by more or less profound immobilization, should both act directly in intensifying an already disturbed venous circulation. Given, then, an inefficient circulation, with the venous stasis, edema, etc., that follows, and the presence of a greater or less quantity of embryonic connective tissue, and we have all the requisites for the production of future pelvic indurations. At about the time that, under ordinary conditions of wound healing, the embryonic tissue would be undergoing absorption, the patient on whom we have operated, who has been in the prone position for about three weeks, the position most favorable to venous outflow, suddenly assumes the upright position and increases her muscular activity, which excites arterial inflow and impedes venous outflow. The venous stasis thus produced is very unfavorable to the absorption of the embryonic connective tissue found in and about the pelvic wound surfaces. So much so is this the case that often not only is the absorption of the embryonic tissue hindered by this local irritation, but an actual increase of new tissue is produced. It is my opinion that it is the accumulation of an excessive amount of embryonic connective tissue substance that forms our postoperative pelvic tumefactions and constitutes our so-called pelvic exudates. If this embryonic tissue is rich in fibers our tumefactions appear as firm indurations; if, on the other hand, there is a scarcity of fibrous elements and an abundance of soft, young cells, we then get our less resistant, semi-fluctuating masses. As the pelvic circulation improves and gradual absorption of this embryonic tissue takes place, our tumor disappears. If, on the other hand, no improvement in the circulatory condition is brought about, and no effort is made to encourage the absorption of this new tissue, it becomes a more or less permanent structure in the pelvis, and, in time, will gradually change from the embryonic type to the adult connective tissue type, until, eventually, as has been demonstrated to me more than once, a hard, fibrous mass, formed, at least in part, of adult fibrous tissue, will occupy the site of the original pelvic induration, and may, perchance, give rise to a complex symptomatology quite as distressing, if not as serious, as the original condition for which we operated.

Careful observation leads me to believe that these products of a disturbed circulation can often be prevented by a prolonged convalescence, the assumption of activity very gradually, aided, when possible, with general hygienic and local depleting measures. The general prophylactic measures to be adopted are, of course, those which tend to improve the general circulation, such as light massage, alcohol and salt friction rubs, tepid sponge baths, etc. Local depletion, at this stage, consists in copious hot douches once or twice daily.

Such postoperative care as just outlined is, of course, impracticable in our hospital service, and can only be applied to a small percentage of our private patients, but it is a wise practice when it is carried out, and when it can not be carried out we must follow our patients up and give each one whatever postoperative treatment, both local and general, the exigencies of her case demand and her circumstances and environment render possible.

When, some time after operation, examination reveals the presence of a pelvic induration or tumefaction, we must at once institute appropriate treatment and continue this treatment until the so-called exudate undergoes absorption. Physical exercise must be kept within very reasonable bounds, and all the excretory organs kept active, especially the skin. Local treatment will consist in stimulating and depleting measures. The two most useful are the copious hot douche and the depleting tampon. The douche may be used once, twice, or three times daily, depending on the urgency of the case, and should always be taken in the recumbent position, preferably with the hips elevated. The amount of water to be used in the douche should not be less than two gallons, and the temperature should be as high as the patient will permit—from 110 F. to 120

F. The tampon must consist of some light, fluffy and non-absorbable material—something that will not ball up into a hard, irritating mass. Fine Australian lamb's wool makes the ideal material for tampons. The depleting medicament to be used on the tampon will differ with individual preference. The menstruum must be one which encourages free exosmosis, to which may be added astringents, antiphlogistics, or antiseptics. The local application of electricity might, in some cases, be beneficial. Local pelvic massage, as suggested by Brandt, is very serviceable in the hands of some men and very harmful in the hands of others. The difference is purely a matter of individual proficiency in its use.

Incision and drainage of these pelvic masses through the vault of the vagina naturally suggests itself. I have never found it necessary so far, although, in one case, I was tempted to do it. I was glad afterward that I refrained from surgical interference, as continuance of depleting local treatments soon brought about complete resolution of the exceptionally large, semi-fluctuating tumor present in this particular case.

In conclusion, I simply wish to say that I am thoroughly convinced that, as we study more intelligently and carefully the local postoperative conditions existing in patients whose pelves have been the seat of acute or chronic inflammatory disease, the more necessity we will find for intelligent postoperative treatment, and the more gratifying will be our remote operative results to both the patient and ourselves.

DISCUSSION.

DR. H. O. PANTZER, Indianapolis, challenged the paper for being at variance with the ordinary principles of pathology. The term used—pelvic exudates—implies an infection giving rise to pyosalpinx. This disease, he said, is practically always accompanied by temperature. These cases can be ascribed more properly to postoperative hemorrhage. All the phenomena present can be explained on such hypothesis. Dr. Pantzer believes that had Dr. Wakefield done a posterior colpotomy he would have found, in addition to pus, the evidences of blood. These cases may become suppurative and develop temperature at any time after operation, even without infection. They are to be grouped under the head of incomplete hemostasis or postoperative hemorrhage.

DR. C. O. THIENHAUS, Milwaukee, Wis., said that there are two reasons why we do no longer hear so much of postoperative exudates. The first reason is that surgeons have given up the use of silk ligatures within the abdomen. Five years ago Dr. Thienhaus called attention to the fact that when silk is used within the abdomen and the operative field is infected during the operation or becomes infected after operation, the silk ligatures also become infected and often form a nucleus for later exudates, from which fecal and other fistulas and other conditions may originate, the correction of which proves a troublesome and dangerous task even to the expert surgeon. The other reason is that surgeons now do more complete operations. If, during an operation for pus tubes, a part of the tube is not excised and thereby a small area of infection is left, postoperative exudates may form.

DR. D. H. CRAIG, Boston, reported a case which interested him greatly. About eighteen months before coming under his observation, at the Free Hospital, a woman had both tubes and ovaries removed. She did not make a satisfactory recovery. Dr. Craig found a mass about the size of a lemon in the region of the broad ligament; it was easily palpable through the vagina. The patient also had an adherent retroversion and badly irritated, lacerated cervix. The cervix was repaired, and the mass was still palpable in the broad ligament. The abdomen was then opened and the adherent uterus loosened and suspended. The most diligent search failed to reveal any tumor in the broad ligament. The patient was discharged from the hospital at the end of four weeks. Two weeks afterward she reported at Dr. Craig's clinic with the mass as plainly palpable as ever. He called in several other men, and they all felt the tumor. She returned a week later, and not one of five men could find the mass. At the end of another week she reported again with the mass as manifest as at her first visit. The question is, what was the mass? Dr. Craig believes that it was a broad ligament varix, and that the lithotomy position maintained during the first operation, superseded by the Trendelenburg posture had drained the varix so that it disappeared. If this was a postoperative exudate, Dr. Craig would like to know what to do.

DR. J. RIDDLE GOFFE, New York, stated that his attention has been directed to this line of treatment in his work for the relief of sterility. In these cases a very slight cobweb adhesion may be the cause of the most persistent sterility. In operating in cases in which he did not find it necessary to remove any tissue, and contented himself with breaking up adhesions and setting the organs free to perform their functions, it occurred to him that it might be wise to promptly begin postoperative treatment, and by doing so he has been able to attain some excellent results. He referred to the depleting effect of tampon treatment and hot-water douches, and advised against waiting until the exudate can be felt before beginning that treatment. If the douches and tampon are used too early, however, the normal healing process is prevented; therefore, he waits until the twelfth day, or even the fifteenth, before instituting this treatment. The etiology of these postoperative adhesions is more or less obscure. In most cases there is infection, although not of a virulent character, and Nature as a matter of protection throws out a certain amount of plastic exudate. This, as a rule, does not develop into an abscess. Postoperative treatment will assist materially, not only in preventing the exudation from forming, but also in hastening its absorption after it has occurred. It is important to follow up patients and to examine them carefully after operative procedures in the pelvis. In the last few years it has become a growing ambition to get patients up too early. Recently, before the New York Obstetric Society, a physician said that he allowed his laparotomy patients to get up as soon as they wanted to, some being on their feet the day following the operation. This is going to an unfortunate extreme. In order to get the best results, it is necessary to keep patients quiet longer, and when there has been extensive inflammatory exudate preceding operation, one may expect more or less recurrence of it after operation. Hence it is well to give postoperative treatment before discharging the patient.

DR. C. S. BACON, Chicago, thinks that there are several causes for this condition. It is sometimes due to hemorrhage; sometimes to scpsis; sometimes, possibly, to varix, and it may be the result of a non-virulent infection. Even a gonorrheal infection, at a late stage, does not necessarily produce much temperature, and thus it might be overlooked entirely. Infection from the intestinal tract might account for some of these cases. Dr. Bacon feels quite certain that some of these exudates are of infectious origin. The same condition of affairs is seen in a mild breast infection, with a beginning abscess, but it almost always disappears if treated properly by absolute rest, with support of the breast and the application of cold or heat. This is the reason for the good effects of the treatment in the cases reported, and it also emphasizes the point made by Dr. Goffe that there is great danger in getting patients up too early after operations, and in not getting them up in the proper way. The postoperative treatment should be like the management of the puerperium. It is not necessary to have the patient in bed for a week or two and then have her get up for a whole day. When she begins to get up, let her do so carefully and gradually. When the postoperative management of a case is carried out like the management of the puerperium, fewer of these conditions will occur.

DR. J. H. CARSTENS, Detroit, thinks the percentage of these cases depends on the surgeon. If he is a broad, all-around man, he will have only about 4 or 5 per cent. The trouble is that surgeons are all specialists; they are not broad enough to see everything. Some surgeons have too poor a technic.

They make mistakes, too. Dr. Carstens has seen men tie off a tube containing pus, and the patient has a postoperative exudate. The way to do is to cut the tube in a V-shaped way and then bring the ends of the V together and cover it all over with peritoneum. Then, as a rule, there will not be any adhesions. To dig through the intestines and try to break up adhesions is bad. If it is in a pus case, Dr. Carstens advised taking a little rubber tube with a cross piece, putting it in the cul-de-sac and draining through the vagina. In the place of peritoneum one can use Cargile membrane. Dr. Carstens has most trouble in cases in which he does conservative operations; those in which he leaves half a tube or an ovary, or in which he does an abdominal or vaginal hysterectomy and leaves one ovary. Another thing at fault is the after-treatment of these patients. They do not get enough to drink. One can not get absorption and elimination from solid tissues. These patients need liquids, and must be flushed out. The eliminating organs must be opened up. Every patient should receive two or three quarts of saline solution by rectum or under the breast immediately after the operation. They must have plenty of water, at least three quarts a day, one-half pint or a pint at a time, if the stomach is all right. Then, if there is a little exudate, Dr. Carstens uses a mercurial. He commences with protoiodid of mercury, one-eighth of a grain every three hours, until he has given about thirty doses. That acts as an alterative and absorbent and opens up the lymph channels, and the patients get along better. They have comparatively few complications.

Dr. Frank T. Andrews, Chicago, agreed with Dr. Carstens that infection often comes from the cut extremity of the tube, but his method of prevention has been more radical than Dr. Carstens'. He removes the whole tube, even into the horn of the uterus, and then closes the wound with a web stitch, often not ligating the uterine and ovarian arteries, simply running a stitch along the top of the broad ligaments. That, however, depends entirely on the individual case.

Dr. H. C. Crowell, Kansas City, said that the worst sequelæ and the most important are those that follow these operations. If it were not for the kindness of Nature in absorbing adhesions, surgeons could not enter the abdominal cavity. However careful the procedure, the endometrium is more or less disturbed and sequelæ result. Dr. Crowell believes that the age of the silk suture has passed, but stated that catgut is a source of trouble if not carefully prepared. The knot in the suture gives rise to an exudate which may end in an abscess. He believes that a shorter-lived catgut may be used safely, because the ligation of vessels requires a very short time for perfect occlusion. The technic is the most important point. Dr. Crowell thinks that patients ought to get up early, as fluids gravitate toward the pelvis if the patient is in the erect position. He advised getting the patient up on the second or third day and encouraging circulation by putting her on her feet and allowing her to walk. Exudates are then absorbed. He has allowed hysterectomy patients to get up on the second day and always inside of a week. He is satisfied that these patients do better than they would if kept in the recumbent position for a long time.

Dr. W. F. Wakefield said that the class of cases Dr. Pantzer spoke about are ruled out of the discussion. The paper expressly excludes them. These are mechanical conditions that are practically never found while the patient is in bed, and Dr. Wakefield has examined these patients carefully for the last two or three years. It is after the patients get up that these conditions are found, and even then they depend on how slow convalescence has been. If very slow, exudates are rarely found at all; if rapid, in from two to eight weeks after the patient begins to walk, one finds these tumefactions. Dr. Craig's case illustrates exactly the class of cases referred to. Dr. Wakefield said that he could have mentioned from fifteen to twenty similar cases. Gynecologists have not been looking for these indurations and, therefore, they have not found them as often as they have been present. These tumors are pure mechanical entities. Just what the mechanism is he is not prepared to say. Sepsis has nothing to do with it. He has never found sepsis in any case. An embarrassed circulation is probably the largest factor, and this circulatory irritation acting on the new tissue accounts for the condition in all likelihood. He has never cut into one of these tumors, and he believes that if he had he would not have found anything. Nevertheless, unless the absorption of this mechanical mass is brought about, the patients will suffer from ill-defined pelvic irritation, almost as troublesome as the original condition for which they were operated on. Dr. Wakefield explained that he used the term exudate because it is the term used in the literature. It refers to any tumefaction about the field of operation. He thinks it is a misnomer. Throughout his paper he speaks chiefly of the *so-called* exudates and calls them mechanical tumefactions. He does not believe that they are real exudates. The percentage of their occurrence depends not so much on the technic of the operator as on other things. He removes tubes just as Dr. Carstens does. When he mentioned 60 per cent. he did not mean that there was a definite tumor in that percentage of cases, but that on examining these women in from six to eight weeks after operation he has found in 60 per cent. either a thickening of the broad ligament or a distinct tumefaction. He does not believe in letting patients get up early. In carrying on a series of experiments on patients he found that these tumefactions are almost invariably produced in patients who get up early. The longer the patient can be kept in bed and the more protracted the convalescence the less likelihood there is for the formation of these tumefactions.

HERNIA OF THE TUBE WITHOUT THE OVARY.*

FRANK T. ANDREWS, M.D.
CHICAGO.

I wish to report four cases of hernia of the tube without the ovary, one furnished by Dr. James H. Haberlin, Pawtucket, R. I., and another by Dr. H. H. Judd, Chicago, the third and fourth being from my own practice.

I have made an exhaustive search for recorded cases of hernia of the female pelvic organs and find 362 cases sufficiently well reported to be of value. These cases, with my own, may be tabulated thus:

	Cases.
Hernia of tube without ovary	46
Hernia of ovary and tube	80
Hernia of ovary without tube (or tube not mentioned)	167
Hernia of non-gravid uterus	42
Hernia of pregnant uterus	30
Total	366

Early in the second century, Soranus of Ephesus described the first case of hernia of the ovary. No further observation was made until 1716, when Louis Leger de Gouey of Rouen wrote an article citing a case of intrahernial tubal pregnancy.

The literature of tubal hernia is practically the same as that of ovarian hernia, but in 1893 Lejars[1] published an article on hernia of the Fallopian tube without the ovary; and in 1901 Dr. Paul F. Morf[2] published a very complete work on the same subject, reporting 24 cases, including his own.

REPORTS OF FOUR CASES.

I wish to record here the following cases:

Case 1 (Reported to me by Dr. H. H. Judd).—Patient, a Swedish widow, 56 years of age, and admitted to Cook County Hospital May 12, 1905. First noticed small tumor in left groin fourteen years ago after doing some heavy lifting while eight months pregnant. Tumor was easily reduced, and gave no trouble until one and one-half years ago, when it again appeared and reduction was impossible. Physician was called

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Revue de Chirurgie, January and February, 1893.
2. Annals of Surgery, 1901.

who obtained reduction. This attack was accompanied by considerable pain at site of tumor, restlessness, irritability and vomiting. Had similar attacks one year ago, also three months ago. Present attack is accompanied by more pain than before, and patient had vomited several times on day of admittance.

Examination showed small irreducible tumor in left inguinal region, firm in consistency, except at distal extremity, where it was tympanitic. Tumor gave slight impulse on hard coughing and was somewhat tender.

Operation performed by Dr. Kahlke. Incision over tumor, sac opened and dissected loose. Sac contained portion of ileum, which was very dark colored, a portion of broad ligament and a loop of Fallopian tube while ovary was situated within abdominal cavity, but firmly pressed against femoral ring and neck of sac. Tube and ovary replaced, sac excised and wound closed with catgut. Chart of temperature, etc., was as follows:

	Pulse.	Temp.	Resp.
On admittance	100	98	20
After operation	108	101	30
Third day	84	98.8	24

Patient made uneventful recovery and was discharged June 13, 1905.

CASE 2 (Reported to me by Dr. J. H. Haberlin).—Mrs. B. N., 45, white, United States.

Family History.—Father died at 58 years of pulmonary tuberculosis after four years' illness. Brother, third born, died at 23 of pulmonary tuberculosis, two years' illness. Brother, second born, died at 35 years of Landry's paralysis. Brother, fifth born, died at 39 years of chronic nephritis and hepatitis (alcoholic etiology). Mother living and well at 76 years, excepting slight edema of legs and periodic subacute rheumatic attacks. Yields readily to treatment. Brother, 50 years, in good health. No one beside the patient ever had a hernia.

Previous History.—Patient was a full term child, born in normal labor. Never sick in infancy. Breast fed until late in infancy. Had measles and pneumonia in early childhood. Otherwise well. Jumped from a high wall at 7 years of age and received hernia in the left groin. Twelve years ago, while lifting heavy weight, received hernia in right groin. Was treated by Dr. O. Edwards, Boston. He injected a solution that caused intense inflammation, with consequent great suffering. After a week, the symptoms of inflammation subsided and patient was discharged cured. The left hernia never recurred, but the patient thought she felt the right hernia recurring and dropping lower down. The doctor, when again consulted, however, insisted that the hernia was cured and refused further procedures. Every since this time, patient has had a hernia in the right groin.

Personal History.—Patient uses alcohol moderately. Has worked in a department store as clerk since husband's death (fifteen years ago) until about two years ago. Appetite good. Bowels slightly constipated. Sleeps well. Disposition cheerful. Menses appeared at 16 years; were then regular, flowed six to seven days without pain until 19 years of age. Then patient suffered pain during the flow. Married at 20 years. Had child at 21 years and at 25 years. Labor normal. Never miscarried. Has had leucorrhea ever since marriage almost constantly, but amount and character has varied. Sometimes discharge was thick, white and tenacious, sometimes it was thin and white or yellow. Widow for fifteen years.

Present Illness.—I was called to see the patient May 14, 1905, at 8:30 p. m. Found her seated in a rocking chair, tearful and evidently suffering great pain. (Patient usually a stoic.) Hernia has been down four days and patient is unable to reduce it. Usually she can reduce it at its worst stage by lying on the floor and putting feet on the bed and then gently manipulating the tumor. Patient has not menstruated for six weeks. Never before has this latter occurred except in pregnancy.

Examination.—Firm rounded tumor as large as grape fruit. Patient placed in dorsal decubitus with feet raised, and I manipulated the hernia to obtain reduction. Manipulation caused great pain if done at all but gently. Tumor gradually reduced to size of small lemon, when further reduction was absolutely impossible.

Diagnosis.—Ruled out tuberculous femoral glands, hernia of tube and ovary and enterocele in favor of incarcerated epiplocele (inguinal).

Operation.—This was advised as only resort. Patient consented. Patient was removed to St. Joseph's Hospital, Providence, R. I. Dr. William L. Harris of the surgical staff agreed that it was epiplocele, but thought it femoral and strangulated. In discussion, he did not insist on the latter condition, however. Operation was by Dr. Harris. Incision parallel to Poupart's ligament. Sac exposed and seen to contain a light yellow-colored serum. Tumor as large as small lemon, as before mentioned. Tumor punctured and serum allowed to escape. Sac (peritoneal) incised and the cyst wall seen to be connected to one of the fimbriæ of the tube, all of which were in the wound. Fimbriated end of the tube amputated. Hernia was femoral.

Postoperative History.—Ideal patient; ideal result. Left the hospital fifteen days after operation. Was obliged to use napkins every day in the hospital for slight saneous discharge. Pain in wound week after operation disappeared in three days. Menses appeared two weeks after return home; lasted scarcely five days, with decidedly less pain and discomfort than usual.

CASE 3 (author's).—March 24, 1904, I operated for Dr. Childs of Roseland, Ill., on Mrs. K. (multipara, aged 32, married eleven years), for diseased appendages. There was a history of gonorrheal infection three years previous, followed by salpingitis. A right inguinal hernia, caused by carrying pails of water, had existed for sixteen years. Operation disclosed the usual condition of adhesion on both sides, except that the right tube led in a straight line to the hernia. About one-half the tube was adherent, together with omentum in the hernial sac. The internal inguinal ring was patulous, a loop of bowel evidently slipping in and out of the sac readily. I removed the appendages and repaired the hernia. The patient made a normal recovery.

CASE 4 (author's).—Mrs. W., aged 23; admitted to Mercy Hospital April 30, 1905. Married one and one-half years. Had a child born March 2, 1905.

Previous History.—No tuberculosis in family. Had as diseases of childhood measles, whooping cough and scarlet fever. Suffered occasionally from pain in abdomen and diarrhea. Periods began at age 13, and were regular every four weeks. Flow profuse and not very painful. Never had any weakness or pain in the right groin nor knew of any tumor or hernia. After birth of a child, March 2, 1905, she evidently suffered from infection, giving a history of irregular chills, alternating with high fever. At first there was considerable vomiting. Since then there has been great pain and tenderness in the right inguinal region, with the gradual development of great swelling.

Examination.—Temperature 101 to 103; pulse 100 to 140. The abdominal wall on the right side was swollen and edematous, the swelling extending upward to the ribs and downward on to the anterior surface of the thigh. Digital examination revealed a mass involving the right appendages, but nearly filling the pelvis. The outlines of ovary, tube or uterus could not be distinguished.

Diagnosis.—Pelvic abscess due to rupture of right pyosalpinx with adhesions to anterior abdominal wall.

Operation.—I was assisted in the operation by Drs. Barnes and Norris. Ether was given by Dr. Mitchell. Usual preparation. Trendelenburg position. Incision 4 inches long in median line. Pelvic organs on right side were matted together and covered by adherent omentum and intestine. After separating the omentum and bowel from the mass, the uterus could be seen drawn to the right. Laparotomy sponges were inserted to wall of the field of operation. On separating some uterine adhesions with the finger and drawing the uterus to the left, it was discovered that the right tube and round ligament had been severed at the uterine horn. On introducing a retractor to lift the abdominal wall, pus could be seen escaping from the internal inguinal ring into the peritoneal cavity. The parts were cleansed of pus, and the finger inserted through the ring into the cavity of the abscess. An incision was made through the skin into the hernial abscess and a gauze drain inserted. A gauze drain was also used in

the median incision and the remainder of the wound closed by silk-worm gut, interrupted sutures. The patient made an uninterrupted recovery and left the hospital May 30.

The following cases I have gleaned from the world's literature:

AUBRY:[2] Age 70, postmortem examination revealed hernia of the Fallopian tube. Tube had passed through femoral ring and lay in front of the pectineus muscle, between the adductors and the femoral vessels.

BERNARD:[4] Age 45, acquired crural hernia of the right tube; irreducible. Exploratory puncture evacuated clear fluid; patient showed symptoms of a phlegmon and death occurred seven days after evacuation. At autopsy, a seropurulent peritonitis was found. The neck of the sac passed through the crural ring, and within it the Fallopian tube, somewhat enlarged. No other viscera were found in hernial sac.

BOUDIN:[5] Age 50, acquired crural hernia; irreducible. Operation, sac was found to contain the Fallopian tube alone, strangulated by neck of sac. Recovery.

BRUNNER: Case 1.—Age 68, irreducible; acquired crural hernia. Operation; the sac being opened, clear fluid escaped, disclosing swollen and edematous extremity of right Fallopian tube; the tube was reduced; a lipoma situated in upper portion of sac was isolated and extirpated. Recovery.

Case 2.[6]—Age 38, acquired inguinal hernia; irreducible. Operation; clear fluid tinged with red escaped from sac after incision. Right Fallopian tube was contained in sac. By making traction on tube, the ovary was dragged forward, but was found to be perfectly healthy. Tube was reduced and the sac ligated and resected. Recovery.

CHIENNE:[7] While dissecting the body of a woman, aged 73, found an obturator hernia; the sac contained two-thirds of the Fallopian tube and two inches of the ileum. The bowel was gangrenous and had given away. On the opposite side were two obturator hernias, an anterior sac formed of parietal peritoneum and the posterior sac containing the outer half of the Fallopian tube. A year previous she had been successfully operated on for strangulated femoral hernia.

DEMOULIN:[8] Operated in a case of hernia of the tube, where there was adherence to the sac; traction brought the ovary to view.

DEAVER, J. B.:[9] Strangulation of the fimbriated extremity of a Fallopian tube of the right side, which was thought to be a femoral hernia.

DOLBEAU:[10] Tumor in inguinal region presenting signs of an abscess of inguinal canal. Incision pus escaped. Peritonitis and death. Autopsy showed pus collection surrounded by hernia sac, which contained likewise a serous cyst. Incision of cyst revealed Fallopian tube.

DUPONT:[11] Age 38, in fifth month of pregnancy, acquired inguinal hernia. Exploratory puncture caused escape of yellowish fluid. Operation revealed herniated Fallopian tube, organ was reduced. Recovery.

ERICHSEN:[12] Age 37, acquired left strangulated hernia. Operation sac contained clear fluid and the swollen fimbriated extremity of the Fallopian tube which was tightly nipped at the neck of the sac. Tube was returned into abdomen. Recovery.

FERE:[13] Child. Age 3 weeks; at autopsy a hernial sac containing exclusively the fimbriated extremity of the Fallopian tube was discovered external to the round ligament. It was easily reduced, but returned immediately after pressure was removed.

DEFRANCISCO:[14] Age 32, acquired inguinal hernia of the left tube, irreducible. Operation; sac exposed and opened. Contained adherent tube; the latter was separated as much as possible; sac was separated from surrounding parts and closed with sutures and stumps replaced. Recovery.

FRANK:[15] Age 21, left tubal hernia, acquired. Operation; removal of tube and sac; recovery. Had been operated on when a child for hernia on same side. No trace of ovary could be found in last operation.

GOEBEL:[16] Age 62, acquired right crural hernia, irreducible. Celiotomy; sac contained serous fluid and dilated Fallopian tube; it was removed, as was likewise the corresponding ovary, which was sclerotic. Recovery.

DE GOUZI[17] (of Rouen, in 1706): Young woman, hernial sac of right groin; when sac was opened, clear fluid escaped. (On reading original, this is seen to be evidently hernia of tube.) Inside another bag a live fetus, 6 inches long, was found; latter was removed, tying the cord. Placenta likewise came away; it was fastened to circumference of musculus obliquus externus.

LEJARS:[18] Age 39, acquired inguinal hernia of the right tube; strangulation. Operation; sac contained blood-stained fluid and Fallopian tube; tube was excised with sac; it was gangrenous in places. A portion of the wall of the urinary bladder also became herniated through the internal ring in company with the hernial sac. Recovery.

LENTZ:[19] Age 52, acquired crural hernia of the left Fallopian tube; dropsy of the hernial sac. On dissection, bloody fluid was evacuated. The Fallopian tube was ligated and excised with the sac. Recovery.

JALAGUIER:[20] Age 19 months; since the age of 6 months right inguinal hernia. Operation; sac, formed by the canal of Nuck contained a knuckle of the right Fallopian tube. Excision, followed by recovery.

KOUSMINE:[21] Age 36; left acquired inguinal hernia; irreducible. Operation; after opening sac, large quantity of seropurulent fluid escaped. This disclosed a cystic Fallopian tube, the external half of the tube only occupying the sac. Recovery.

MAYDL:[22] Age 47; acquired femoral hernia; irreducible. Operation; after incision, escape of hemorrhagic fluid, which disclosed knuckle of Fallopian tube in the femoral canal; the uterine half of the tube was converted into a cyst; the strangulated portion of the tube consisted of a loop, which had passed back into the abdominal cavity after having passed out through crural ring. Its extirpated the sac containing the tube; also removed the corresponding ovary. Recovery.

MOLLER:[23] Age 46; right inguinal hernia, acquired. Herniotomy; sac was found to contain a pyosalpinx. On account of collapse operation was hastily ended. Recovery with a formation of a fistula.

MORF:[24] Age 24; left congenital inguinal hernia of the Fallopian tube; irreducible. Operation; sac was removed with its contents, together with left ovary; sac contained omentum, into which mass the tube was traced, its fimbriated extremity being completely surrounded by omental tissue; from it the infundibulo-pelvic ligament could be traced; passing out of sac. Recovery.

MORTON AND BUTLER: Case 1.—Age 46; acquired right inguinal hernia; irreducible. Operation; sac was found to contain right Fallopian tube and its fimbriated extremity. Reduced sac ligatured and cut away. Recovery.

Case 2.[25]—Age not known; strangulated right femoral hernia. Herniotomy; sac contained gangrenous omentum and gangrenous ruptured bowel and end of right Fallopian tube, which was gangrenous to the extent of half an inch. The patient died from shock twelve hours later. Autopsy.

NELATON:[26] Child died twenty-four hours after birth; right inguinal hernia containing Fallopian tube.

PICQUE AND POIRIER:[27] Age 78; acquired obturator hernia; strangulation; death. Autopsy, sac formed by peritoneum contained a knuckle of intestine, an epiplocele and left tube with a part of its ligament.

POLLARD (Bilton):[28] Age 37; acquired strangulated femoral hernia. Operation; sac contained clear fluid and the swollen fimbriated extremity of the left Fallopian tube, which was tightly nipped at the neck of the sac. The constriction was divided and the tube returned into the abdomen. Recovery.

SALNELLE:[29] Age 19 days; congenital hernia on the right side; strangulated. Operation. Sac was opened and was found to contain the right Fallopian tube, red and swollen. Death.

SCHOLLER:[30] Age 20 days; congenital inguinal hernia; convulsions and death. Autopsy showed hernia of the right tube. It was red and swollen; the round ligament was a little shorter than that on the other side and the uterus slightly displaced.

DE VAUCHER:[31] Age 23; probably congenital inguinal hernia; irreducible. Operation; sac contained left Fallopian tube without ovary; sac and tube excised. Recovery.

VOGEL:[32] Age 38; acquired inguinal hernia; irreducible. Operation; opening of the sac; escape of blood-stained fluid, disclosing right Fallopian tube in bottom of sac. The tube was returned into abdominal cavity; the sac removed. Recovery.

VOIGT:[33] Age 36; acquired right inguinal hernia; irreducible. Swelling "opened," discharged a serous fetid pus, after which patient's general condition improved. The next day a small black, gangrenous body was found in the dressings, which was recognized as the Fallopian tube. Recovery.

THOMAS:[34] Age 36; acquired hernia on the right side; irreducible. Omental hernia on the left side, reducible. Operation. Right crural hernial sac contained the fimbriated extremity of the Fallopian tube. Gimbernat's ligament (crural hernia) was nicked and the hernia reduced. Recovery.

TRINCI:[35] Age 47; X-para; crural hernia; irreducible; appeared after last pregnancy; symptoms of strangulation. Operation; sac contained the right tube; resection of the tube above the strangulated point; radical cure. Recovery.

VARAL:[36] Reports another observation by Broca. Child, age 14 months; congenital inguinal hernia; strangulated for twenty-four hours. Herniotomy, the tube was found in the sac. Temperature after operation 37.4 C.; the following days, 37. Recovery.

WALDEYER:[37] Demonstrated before the Obstetric and Gynecologic Society of Berlin, June, 1896, an inguinal hernia, in which lay a tube.

WALTER:[38] Aged 14 months; at 6 weeks of age tumor was first

3. Bull. de la Soc. Anat. de Par., 1842, p. 143.
4. L'Experience, 1839, p. 216.
5. Lyon Medical, 1899, vol. xci, p. 231.
6. Beit. z. klin. Chir., vol. lv, 1889, p. 32.
7. Ed. Med. Jour., January, 1871, p. 601.
8. Annales de Gynec., 1900, vol. liii, p. 203.
9. Annals of Surgery, 1904, vol. xl, p. 154.
10. Société Anatomique, 1824, p. 72.
11. Bull. de la Soc. med. de la Suisse romande, 1878, p. 115.
12. Science and Art of Surgery, vol. ii, Tenth Edition, p. 1297.
13. Rev. mens. de Med. et de Chir., 1878, vol. iii, p. 479.
14. Beit. z. klin. Chir., 1900, vol. xxiii, No. 2.
15. Internat. klin. Rundschau, Wien, 1892, vol. vi, p. 1098.
16. Berichte der med. Gesellschaft, zu Leipzig, March, 1896.
17. La veritable Chir. etab. a. l'experience et la raison, Roan, 1716, 5 partie, p. 401.
18. Revue de Chirurgie, 1893, vol. xiii, p. 13.
19. Gazette Med. de Strasbourg, 1881, No. 9, p. 97.
20. Schultz: Thèse de Paris, 1898.
21. Revue de Chirurgie, April, 1895, p. 313.
22. Wien. Klin. Rundschau, 1895, vol. ix, p. 17.
23. Hygiea, 1894, No. 5, p. 431.
24. Annals of Surgery, 1901, vol. xxxiii, p. 247.
25. London Lancet, Feb. 17, 1894, p. 403.
26. Elements de path. chir., 1857, vol. iv, p. 440.
27. Revue de Chirurgie, 1892, vol. xii, p. 330.
28. Erichsen: Science and Art of Surgery, vol. ii, p. 1297.
29. Thèse de Paris, 1880, p. 84.
30. Gazette Med. de Paris, 1840.
31. Thèse pour la doctorat, 1854, p. 45.
32. Centralbl. für Gynäk., 1886, vol. x, p. 166.
33. Hufeland: Jour. der pract. Heilkundl., 1809, No. 3, p. 139.
34. Brit. Med. Journ., 1896, vol. xi.
35. La Clinica Moderna, 1904, No. 22.
36. Thèse de Paris, 1895.
37. Centralbl. f. Gynäk., 1896, vol. xx, p. 792.
38. Schultz: Thèse de Paris, 1895.

observed in inguinal region. Operation; the hernia contained a loop of small intestine and the Fallopian tube strangulated moderately. Reduction. Recovery.

Walther (G. Th.):[39] Age —; right inguinal hernia. Operation; sac was found to contain a cystic dilated accessory Fallopian tube (congenital malformation).

Walther (G. Th.):[39] Age —; right inguinal hernia. Operation; displaced to the right. The right tube and corresponding tubo-ovarian ligament extended into right inguinal ring. On left side, internal inguinal ring was occluded by fimbriated extremity of the left tube passing into it.

Case 2.[40] Age 6 months; congenital inguinal hernia of the left tube found; postmortem the sac contained the tube only. The left ovary was situated in the internal iliac fossa on the right side; tube and ovary occupied their normal position. Uterus was displaced to the left.

Wyeth:[40] Age 38; strangulated right inguinal hernia; when sac was opened congested Fallopian tube was found; pus and feces welled up from the abdominal cavity through the neck of the small loop of intestine was found gangrenous, ruptured; death six hours after operation.

SUMMARY OF ABOVE CASES OF HERNIA OF THE TUBE WITHOUT HERNIA OF THE OVARY.

Inguinal	27	Obturator	2
Femoral	14	Not stated	3

TABLE 1.—INGUINAL HERNIA.

	Age.	Acquired or Congenital	Side.	Operation.	Result.	Contents of Sac.
Andrews, 1.	32	A	R	Returned during laparotomy.	R	Tube.
Andrews, 2.	23	A	R	Excision	R	Prosalpinx.
Brunner	38	A	R	Returned by operation.	R	Tube and clear fluid tinged with red.
Dolbeau				Incision of abscess.	D	Postmortem showed tube.
Dupont	38	A		Returned by operation.	R	Tube and clear fluid.
Féré	3 weeks	C		Postmortem		Tube.
de Francisco	32	A	L	Returned by operation.	R	Tube.
de Goney	Young lady		R	Removal of extrauterine fetus.		Pregnant tube surrounded by clear fluid.
Jalaguier	19 mo.	C	R	Excision	R	Knuckle of tube in canal of Nuck.
Kousmine	36	A	L	Excision	R	Cystic dilated tube in sero purulent fluid.
Lejars	39	A	R	Excision	R	Tube and part of bladder blood-stained fluid.
Möller	46	A	R	Operation	R	Prosalpinx.
Morf	24	C	L	Excision	R	Tube and omentum.
Morton and Butler.	41	A	R	Returned by operation.	R	Tube.
Nelson	1 day.	C	R	Postmortem		Tube.
Salmelle	19 day	C	R	Operation	D	Tube, strangulated.
Scholler	20 days	C	R	Postmortem		Tube red and swollen
Vassel	14 mo.	C		Operation	R	Tube, strangulated.
de Vaucher	23	C	L	Excision	R	Tube.
Vogel	28	A	R	Returned by operation.	R	Tube and bloody fluid.
Voight	36	A	R	Incised	R	Cube and serous, fetid pus.
Waldeyer					?	Tube.
Walter	14 mo.	C		Returned by operation.	R	Tube and intestine.
Walther	?	C	R	Operation	?	Cystic, dilated, accessory tube.
Wiart, 1.	2 mo.	C	D	Postmortem		Tube alone in each hernia.
Wiart, 2.	6 mo.	C	L	Postmortem		Tube.
Wyeth	38		R	Excision	D	Tube, gangrenous intestine. Pus and feces walled up.

ANALYSIS OF TABLE OF INGUINAL HERNIA.

Acquired	11	Right	15
Congenital	12	Left	5
Not stated	4	Double	1
		Not stated	6
Total	27		
		Total	27
Found postmortem (all infants)			5
Deaths after operation			3
Recoveries after operation			17
Result not stated			2
Total			27

VISCERA CONTAINED IN SAC.

Tube and part of bladder	1
Tube and omentum	1
Tube and intestine	2
Tube alone	23
Total	27

In eleven cases the sac contained fluid.

Clear fluid	3
Bloody fluid	2
Pus	6

The ages range from high to 46 years.

TABLE 2.—FEMORAL HERNIA.

	Age.	Acquired or Congenital.	Side.	Operation.	Result.	Contents of Sac.
Andrews, 1. (Judd's case.)	56	A	L	Returned by operation.	R	Tube, strangulated; intestine and broad ligament.
Andrews, 2. (Haberlin's case.)	45	C	R	Excision	R	Tube, epiploon and serous fluid.
Aubry	70	?	?	Postmortem		Tube.
Berard	45	A	R	Puncture	D	Tube and clear fluid found postmortem.
Boudin	50	A		Operation	R	Tube.
Brunner	68	A	R	Returned by operation.		Tube, clear fluid and a lipoma.
Deaver	?	?	R		?	Tube.
Goepel	62	A	R	Excision	R	Tube and serous fluid.
Lentz	52	A	L	Excision	R	Tube and bloody fluid.
Maydl	47	A		Excision	R	Knuckle of tube and bloody fluid.
Morton and Butler.	?	?	R	Excision	D	Tube, omentum and bowel gangrenous; intestine ruptured.
Pollard	37	A	L	Returned by operation.	R	Tube and clear fluid.
Thomas	36	A	R	Returned by operation.	R	Tube. (On l. side was an omental hernia.)
Trinel	47	A	R	Excision	R	Tube, strangulated.

ANALYSIS OF TABLE OF FEMORAL HERNIA.

Acquired	10	Right	8
Congenital	1	Left	3
Not stated	3	Not stated	3
Total	14	Total	14
Found postmortem			1
Death after operation			2
Recoveries after operation			10
Not stated			1
Total			14

VISCERA CONTAINED IN SAC.

Tube and part of bladder	1
Tube intestine and part of broad ligament	1
Tube and omentum	1
Tube and epiploon	1
Tube alone	11
Total	14

In Brunner's case there was, beside the tube, a lipoma in the sac.
In seven cases the sac contained fluid.

Clear fluid	4
Bloody fluid	2
Fecal matter	1

The ages range from 36 to 70 years.

TABLE 3.—OBTURATOR HERNIA.

	Age.	Acquired or Congenital	Side.	Operation.	Result.	Contents of Sac.
Chiene	73	?	D	Postmortem		Tube.
Picque and Poirier.	78	A	L	Postmortem		Tube.

TABLE 4.—KIND OF HERNIA NOT STATED.

	Age.	Acquired or Congenital.	Side.	Operation.	Result.	Contents of Sac.
Demoulin	?	?	?	Operation	?	Tube.
Erichsen	37	A	L	Returned by operation.	R	Tube.
Frank	21	A	L	Excision	R	Tube.

As hernia of the Fallopian tube, without the ovary, constitutes less than 10 per cent. of the recorded cases of hernia of the pelvic organs, it is evident that a description of the anatomy and the etiology may be best considered in a future paper dealing with the greater subject. Pathologic conditions within the tube may also be better discussed then.

The diagnosis, before the opening of the sac, has not been made, but, perhaps, in the case of a small painless hernia the tilting of the uterus toward the hernia might be sufficient evidence that the sac held only the tube.

39. Centralbl. f. Chir., 1897, vol. xxiv, p. 771.
40. Bull. de la Soc. Anat., July, 1898, vol. lxxiii, p. 537.
41. Annales de Gynec., 1900, vol. liii, p. 202.
42. Annals of Surgery, 1894, vol. xix, p. 6.

DISCUSSION.

DR. T. B. EASTMAN, Indianapolis, said that a woman was referred to him with what had been diagnosed as a labial abscess on the right side. It had been incised several times, but the discharge continued. Dr. Eastman made a free incision and after a rather difficult dissection he came on a badly inflamed appendix which was open at the end and discharging pus. Of course this was responsible for the patient's condition. Dr. Eastman removed the appendix and the patient made a good recovery.

DR. A. GOLDSPOHN, Chicago, stated that a number of years ago a woman of at least 60 years of age came under his care as a hospital patient. She had always been fairly healthy, and she had a femoral hernia of small dimensions that had not given her much trouble. It became irreducible, however, and occasioned more or less pain, and she had had something of a convulsion, as her illiterate relatives described it. Examination showed a small tumor in the region of the left femoral ring, corresponding to a femoral hernia, that was not reducible by ordinary taxis. On opening the sac the ovary became apparent; it was adherent, with a small amount of omentum. The operation presented no difficulty and the patient made a good recovery.

SOME COMPLICATIONS OF PREGNANCY. TREATED SURGICALLY.*

FRANCIS D. DONOGHUE, M.D.
BOSTON.

Within comparatively few years, our knowledge of appendicitis and neoplasms, complicating pregnancy, has been considerably increased.

As a rule, the surgeon has been called to treat these conditions, and therefore they have been studied more from the standpoint of the influence of such operations on pregnancy than of pregnancy on conditions which otherwise might be considered operative.

In this country continuous observation of a woman during pregnancy is almost unknown.

The number of complicated cases, therefore, which have been observed by any one individual has been limited. It is true that in some well-to-do families observation is practiced; but as the importance of this observation is recognized, the occasions for it decrease.

Most obstetrical cases are in charge of general practitioners, and this condition will, undoubtedly, continue. The combination of a skilled obstetrician and surgeon is not a common one, and while the obstetrician may be most skillful in all that pertains to diagnosis of position and in the performance of obstetrical operations, the men in charge of these cases still turn to the surgeon when other operative complications are present.

Surgical interference has also been encouraged by the attitude of obstetricians toward "operative delivery" in cases which may be called, from the surgical standpoint, uncomplicated. This is on the increase, especially in large cities,[1] and, undoubtedly, tends to encourage surgical intervention in a growing list of obstetrical conditions. The practitioner, who has seen the development of "surgical trusts" under the name of "hospitals," hesitates when he considers what his financial end is to be if he further countenances the fallacious idea that patients can not be successfully treated at home.

On the other hand, the desire for personal consideration and to remain at home, if possible, is still strong among those who have not contracted "the hospital habit."

With the large number of competent operators who desire only fair remuneration for services rendered it rests with the general practitioner whether or not he will lose the best part of his practice among the great middle class as he has lost it among what may be considered the opulent poor and the economically inclined opulent.

The care of the pregnant woman is by far our most important duty, and any improvement in treatment or in the care which tends to lessen her dangers during this trying period is of utmost importance.

The value of recognizing deviations from the normal early in the conduct of these cases can not be overestimated; acting with conservative promptness in the presence of dangerous complications will save many lives, both fetal and maternal.

Surgical interference is more important in certain conditions in the pregnant than in the non-pregnant.

It has long been an accepted fact that high maternal temperatures are dangerous to intrauterine life, and that when the temperature runs over 104 F. for a continued period of time, no matter from what cause, it is invariably fatal to the child *in utero*.[2]

Suppurative conditions with much lower temperature are dangerous, especially if the process is active in close relation to the uterus.

The study by Straviskiadis of twenty-four cases, including pneumonia, typhoid fever, pyemia, etc., in which macroscopic, microscopic and bacteriologic examinations were made, is a distinct addition to our knowledge of this subject. His conclusions are: 1. An acute endometritis which is often hemorrhagic is of frequent occurrence in acute, infectious disease. 2. This inflammation is caused by the specific bacteria that caused the disease or a complication. 3. Particularly favorable conditions are present during pregnancy and the puerperium for the increase of the bacteria which reach the uterus through the blood current. 4. Abortion or premature labor is frequently due to endometritis of hematogenous origin.[3]

The intimate relation existing between the appendicular lymphatics and those of the broad ligament is of importance in determining the influence of septic conditions of the appendix on pregnancy;[4] but the hematogenous channel, in view of the fact that there is increasing evidence that septic emboli may cause disturbances in the gastrointestinal mucous membrane and elsewhere seems the most probable route of endometrial infection.[5]

APPENDICITIS.

Appendicitis frequently complicates pregnancy. The condition of obstinate and continued constipation which is so frequent during pregnancy must be looked on as a predisposing cause. Add to this increasing deviation from the usual physiologic condition of the pelvic organs of women between the ages of 15 and 45, the mechanical disturbances and congestion resulting from the rapidly growing uterus, and the wonder increases that troubles are not more common. In many cases an absolute diagnosis has not been made, because of the mildness of the symptoms.

In the diagnosis of appendicitis during pregnancy the usual signs may be obscured. Vomiting is often concurrent with pregnancy. As a rule, the pain is localized at the diaphragmatic attachments, while accelera-

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

1. Voorhees: Am. Jour. Ob., January, 1905.
2. MacPhatter: New York Med. Journal, 1901.
3. Monat. F. Geb. und Gyn., Berlin, 1903.
4. Clado: Rend. Soc. de Biol., Paris, 1892. vol. iv.
5. Fowler: Brooklyn Med. Jour., July, 1903.

tion of the pulse and elevation of the temperature are exceptional.[6]

Incessant vomiting may be due to uremia, and abdominal pain with vomiting has been seen "preceding uremic convulsions of puerperal nephritis."[7]

The importance of leucocytosis, if found, associated with localizing pain, during the first six or seven months of pregnancy, is considerable in making a diagnosis. Its value as far as indicating need of operation is apt to be overrated. "At the same time, leucocyte counts are valuable, and a rising count is of more importance than the absolute number."[8]

A constant, high leucocytosis (20,000 to 30,000) in appendicitis always points to the existence of a purulent process, providing there are no other complications to which the leucocytosis may be attributed. "In diffuse peritonitis the leucocyte count loses its certainty."[9]

Taken by itself, it is apt to be misleading, but taken in connection with other signs, it may be of great value in doubtful cases.

There is but one point in the diagnosis which I wish to emphasize: If there is cessation of pain without amelioration of local signs, operation is indicated at once.

The relief of tension brought about by perforation of the appendicular wall will be followed, in a few hours, by an increase in the infected area, making the results of an operation more doubtful.

The first case here reported is one of appendicitis complicating pregnancy, in which a gangrenous appendix was removed at three and one-half months, and in which, aside from a few uterine contractions set up by the removal of gauze drainage, on the fourth day proceeded to term and the patient had a normal confinement.

CASE 1.—Mrs. L. W., aged 36, had been married three years.

History.—In October, 1900, gave birth to a son; labor was tedious, but aside from this there was nothing abnormal noted about the pregnancy or the puerperium. She became preghant again in May, 1901. On Aug. 9, 1901, about 11 p. m., she was seized with a severe pain in the epigastrium, accompanied by nausea and vomiting; the bowels were and had been constipated; the symptoms continued through the night.

Examination.—Dr. H. W. Dudley of Abington was called on the morning of August 10; he found the patient with a temperature of 100 F., pulse 90. Pain was unremittent and the vomiting continued. There was marked rigidity of the abdominal muscles, especially on the right side, and the pain, worse at first in the epigastrium, had localized at McBurney's point. Hot fomentations were applied, and the same afternoon I saw her in consultation with Drs. Dudley Wheatley of North Abington and Osgood of Rockland, the two latter afterward assisting at the operation. At 5 p. m., when I saw her for the first time, the pain of which she had been complaining had in great measure ceased and there had been no nausea for some hours. Temperature was 100.5, pulse 110. Rigidity of the abdominal muscles was very marked, especially of the right rectus, and even moderate pressure over location of the appendix gave rise to pain. Believing that the cessation of pain without amelioration of local signs was not a favorable symptom, and not willing to temporize on account of the existing pregnancy, operation was advised.

Operation.—The usual preparations for an operation in a private house were made.[10] Under ether, a two-inch incision, afterward enlarged to three, was made through the outer border of the right rectus muscle. On opening the peritoneum, the appendix was found directly under the incision; it was dark colored, full of concretions and surrounded by purulent serum which was partially walled off by fresh adhesions of the omentum. Cloudy serum also welled up from the direction of the pelvis. This was carefully sponged out. The appendix was removed in the usual way, one strip of gauze packing was passed down to the stump and another strip passed down to drain the pelvis. The incision was closed by through-and-through sutures of silkworm gut, except for about an inch at lower angle of incision, through which the gauze drains were brought out.

Result.—From the time of operation until the gauze was removed, four days later, there was nothing out of the ordinary to report. After the packing was removed, the patient had two or three attacks of syncope which seemed quite threatening, accompanied by regular rhythmical pains, threatening abortion, but the pain was easily controlled by morphin sulphate administered subcutaneously, and the syncope was treated by alcoholic stimulation.

Subsequent History.—Recovery from this point was uneventful, and the patient was up in three weeks, the abdominal incision being entirely closed. Pregnancy continued until Feb. 26, 1902, when the patient was delivered of an eight-pound daughter. Labor was easy. There was no pain or bulging in the cicatrix from operation. In fact, there has been at no time during the pregnancy or puerperium any bulging of the scar.

Abortion, from conditions either present at the time of operation or which develop after such interference, adds much to the gravity of the prognosis.

Obstruction of the bowel or ileus is not uncommon, especially after operation for suppuration. Operation causes a change in the peritoneum, so that the clinical picture is entirely changed and the usual warning signs are absent.

Temperature and pulse with obstruction may be normal. There may be no marked distension, there may be continued vomiting of dark or fetal matter. There are no colicky attacks.

The most important diagnostic sign is dullness in the flanks, which progressively increases.

Next to this in importance is the facial expression, which, with obstruction, is drawn and anxious.

There is no pain and the patient is comfortable aside from the trouble of vomiting.

There is absence of marked abdominal rigidity.

Treatment consists in change of position, cathartics, followed by enemata, and large doses of atropin until appearance of toxic effects. If response to this treatment is not reasonably prompt, reopening of the wound, with incision of distended loops of intestine, followed in severe cases by tying a Mixter tube into the cecum will give the best results.

The second case was complicated by ileus. There was a fecal fistula and the abortion of a dead fetus. Recovery took place, with spontaneous healing of fecal fistula.

CASE 2.—Dr. R. M. Birmingham, Lawrence, Mass.

Patient.—Mrs. S., aged 28; had been married six years. She has had four children; no accident or miscarriage. She has had no sickness other than periodical attacks of pain in the right iliac fossa during each pregnancy. With these attacks there was nausea, but all trouble was attributed to a growing uterus.

Present Illness.—About 5 o'clock on the morning of April 25, 1904, when she was about three months pregnant, she was seized with extremely sharp and colicky pains in the right iliac fossa; this was followed by collapse. Dr. Birmingham was called and advised immediate operation, to which the family would not agree until the afternoon of the same day.

Operation.—In the afternoon, assisted by Drs. Birmingham and Magee, I operated and found a gangrenous appendix surrounded by about two ounces of purulent matter. There was

6. Pinard: Bull. del'Acad. de med., Feb. 14, 1899.
7. Musser: Am. Med., vol. i, 1904.
8. French: The Practitioner, London, June, 1904.
9. Goetjes: Münch. med. Wochft.
10. Donoghue: Boston M. and S. Jour., Dec. 6, 1900.

slight evidence of an attempt at walling off. A gauze drain was inserted. The vomiting, which had been present from the beginning, continued, but little distension developed.

Postoperative History.—The temperature remained between 99 and 100, but the pulse gradually increased in frequency. Considerable fecal matter and gas was discharged following enemas. Slight vomiting or rather regurgitation persisted.

On April 29, not satisfied with her condition and influenced by the facial expression, under chloroform, the gauze drain was removed. The omentum was found to be down to the region of the appendix stump; back of this was a loop of intestine greatly distended and containing liquid feces.

The adhesion was freed and the distended loops of the intestine incised, emptied and sewed up with continuous Lembert suture.

As symptoms of ileus persisted, on May 30, at 11 p. m., a Mixter tube was tied into the cecum. A saturated solution of salts was administered, followed by three ounces of alcohol and water.

On June 7, labor pains came on and following manual dilatation a dead fetus was extracted. A fecal fistula persisted for six months and then closed spontaneously.

Pain in the right iliac fossa, which increases as the uterus enlarges and pushes up out of the pelvis, should be looked on with great suspicion. Especially is this true of cases in which abortion comes on, following such pain.

A history of one or more such abortions should suggest surgical interference, even if the physical signs do not point definitely to the appendix.

OVARIAN TUMORS.

Tumors of ovarian or tubal origin are dangerous from their position, obstructing delivery, from torsion of the pedicle in the case of the former, or from inflammation.

A differential diagnosis between ovarian, tubal or uterine tumors, if the tumor is low down in pelvic cavity, is often difficult or impossible.

Extrauterine pregnancy presents such a varied clinical picture that it never can be excluded in making a diagnosis.

The acceptance of the dictum that "neoplasms, wherever situated, should, if possible, be removed, no matter what their apparent nature,"[11] would solve most of the difficulties we encounter in endeavoring to make an accurate diagnosis in pelvic conditions before advising operation.

Reposition of a pelvic tumor, with the patient in the knee-chest position, and with or without ether, while not being free from immediate danger, does not, in any way, point toward the removal of the underlying condition, unless the tumor proves to be an incarcerated uterus.

The danger of attempting reposition of an extrauterine pregnancy is sufficiently obvious, while rupture of a cyst and intraperitoneal hemorrhage from ruptured adhesions have been frequently reported.

The danger of torsion of the cyst during manipulation can not be ignored.

If ether is to be given for examination, preparations for operation should be made in case an operative condition is discovered.

While the question of when to operate in the presence of a tumor has been much discussed, there can be no doubt but that operation as soon as diagnosis is made, will yield the best results, unless, indeed, a small tumor, which has given rise to no symptoms, be discovered late in the pregnancy. Even then, the patient should be carefully watched after delivery to see that torsion, rupture or degeneration of tumor from changed blood supply does not take place.

The most common cause of trouble with ovarian tumors, during pregnancy, is torsion of the pedicle. This may take place at any period of pregnancy, and is accompanied by an increase in size and tenderness over the tumor, while a sharp, stabbing pain is referred to the spot at which the torsion takes place. "This is sometimes accompanied by slight bleeding and bleeding pains."[12]

Under these conditions, prompt removal of the tumor is indicated and is followed by cessation of symptoms referred to the uterus. It will add little, if any, to the maternal danger should miscarriage follow.

Graefe,[12] in a study of 178 cases of ovariotomy, undertaken during pregnancy, found that the mortality of the mothers in the entire list was 2.3 per cent. One of the deaths occurred three months after the intervention, and one death was inevitable, as extensive gangrene was found during the operation. The last 126 operations contain only this one fatality. In 119 cases the pregnancy was interrupted by the intervention in only 19, or 16 per cent. In the last series of 27 abortion followed in 5 and premature delivery in 3. This series includes the American cases of Jarman and Kahn. The pregnancy continued undisturbed in two cases, in which there were numerous adhesions or torsion of the pedicle of the tumor. In the cases in which abortion occurred, there must have been some predisposition to it, possibly from decidual endometritis as the trauma of the intervention was slight. Abortion would probably have occurred without the operation. The statistics show that ovarian tumors, during a pregnancy, induce abortion in 17 per cent. of the patients if left unoperated on. After ovariotomy, the pregnancy was interrupted in only 22.5 per cent., and a third of this number presented urgent invitations for surgical relief. The results of expectant treatment have been a maternal mortality of 39.2 per cent., and a fetal of 67 per cent., according to Orgler's and Winckel's statistics. Six of the cases in the series demonstrate that even after evidences of intending abortion have appeared, prompt ovariotomy will afford relief, and the pregnancy will continue its course uninterrupted.

Heil[13] adds to Graefe's statistics five new cases personally observed, and others he has collected, bringing the total to 241. He tabulates the later series, and emphasizes the necessity for careful examination of every pregnant woman who complains of pains or other disturbance indicating some irregularity in the genital sphere. If the diagnosis wavers between extrauterine pregnancy and intrauterine pregnancy with an ovarian cyst, a laparotomy is indicated at once. An ovariotomy is by far a lesser evil than the overlooking of an extrauterine pregnancy, especially for a patient who is not under constant medical supervision. He advocates leaving the tube, if possible, when operating during a pregnancy, to avoid traction on the uterus.

In case a tumor is discovered at parturition, obstructing delivery or impacted in the pelvis, the treatment should be Cesarean section, followed by removal of the tumor.

CASE 3.—Dr. R. M. Birmingham, Lawrence, Mass.

Patient.—Mrs. M., aged 29, had been married three years at the time of operation.

11. Richardson: THE JOURNAL A. M. A., Jan. 9, 1904.

12. Graefe: Munich. Med. M. A., Oct. 28, 1902.

13. Heil: Munch. Med. Ma. February, 1904.

History.—She had one other child, no miscarriages. During the first pregnancy she had severe pain from the beginning, and morphin sulphate in doses of gr. 1/12 was given subcutaneously from time to time. After delivery a tumor to the left of the median line was discovered. Some time after this confinement she had severe pain in the abdomen, followed by nausea and vomiting, and went to the Carney Hospital for treatment. Another pregnancy was suspected, and she was sent home with instructions to report later. Eleven weeks after returning from the hospital she had sudden colicky pain in abdomen and increase in the size of the tumor.

She had been uncomfortable for two or three days, and woke early on the morning of April 19, 1904, with a sudden, sharp, severe, stabbing pain in the lower part of the abdomen. She had nausea and vomited once. Her face was drawn. A large movable tumor, the size of a child's head, could be easily outlined in the lower right quadrant of the abdomen. Temperature was 99, pulse 110.

Operation.—Incision was made through the left rectus muscle. A large ovarian cyst, dark and hemorrhagic, from twisting of pedicle, was removed from the left side. A long free appendix containing a concretion was also removed. Recovery from operation was uneventful. The patient was out of bed on the fourteenth day. On Dec. 12, 1904, she was confined in an uneventful labor and delivered of a boy. There was no bulging in the scar and abdominal wall is perfectly solid.

Retarded menstruation, sharp, colicky and abdominal pain, and a growing tumor in the neighborhood of the uterus, strongly suggest extrauterine pregnancy, and that condition should be borne in mind in making an operative diagnosis.

As a positive diagnosis can only be made after the abdomen has been opened, there is little justification for delay.

If, at the operation, an enlarged tube, which does not prove to be impregnated, is found; or a small cyst of the ovary, which may be resected without difficulty, the patient has suffered in no way from the operation. On the other hand, the chance of a serious crisis, if the case be one of extrauterine pregnancy, should far outweigh any objection to surgical interference.

CASE 4.—Patient of Dr. W. G. Brown, Plymouth, Mass., was seen Oct. 5, 1904, at the Jordan Hospital.

Patient.—Mrs. C., ten weeks pregnant.

History.—For eight weeks previously she had had increasing nausea, until nothing solid or liquid was retained. The smell of food caused severe retching with great pain. There had been severe pain in the right iliac region since the nausea began.

Vaginal Examination.—To the right and back of the uterus a tumor the size of a hen's egg could be felt, extremely tender, and causing great pain when pressed on.

Operation.—Assisted by Dr. E. D. Hill of Plymouth, I opened the abdomen and removed a prolapsed cystic left ovary. The uterus was also caught forward by two sutures to the abdominal wall.

Result.—There was good recovery from operation. The nausea and pain were immediately relieved. The patient left the hospital in three weeks, and nothing unusual took place during rest of pregnancy.

On May 24, 1904, after a labor of fourteen hours' duration, she was delivered normally of a male child, weighing 7½ pounds. The labor was in every way normal, and much more comfortable than the former one, the woman having had one child previous to this pregnancy.

FIBROIDS.

When pedunculated, fibroids closely simulate ovarian tumors, and are liable to the same kind of accidents, while subperitoneal or interstitial fibroids may cause trouble in various ways. Change in the tumor itself, or in its relations, and the cardiac, vascular and nephritic changes which take place with tumor development, all make for early operation, at least during the childbearing ages.

Dr. Franklin H. Martin,[14] in an analysis of 1,188 cases of operation for fibroids, at the hands of A. Martin, Noble, Cullingworth, Frederick, Scharlieb, and a series reported by Kanner and by McDonald, to which he adds 200 of his own, forcibly shows the difficulty of exact diagnosis and notes the presence of unrecognized, serious complications, diagnosis of which was only possible by operation.

In the 1,388 analyzed cases presented in his paper, the operations revealed 32 cases of carcinoma of the body of the uterus, 24 cases of unsuspected sarcomas of the uterus, 70 cases of necrosed tumors, which were very liable to become infected and to cause death, 53 cases of intraligamentous development of the tumor, which are so liable to produce kidney complications by ureteral pressure, and many other serious symptoms; 8 adenomyomas, 2 pregnancies menacing the life of the patient; 5 ectopic pregnancies, 8 dermoid cysts, 97 suspected or unsuspected true ovarian cysts, 12 parovarian cysts, 72 cases of pyosalpinx, 20 cases of appendicitis, 7 cases of intestinal obstruction, 2 cases of acute intestinal obstruction, 2 cases of obstructed ureters, 2 cases of hydronephrosis from pressure.

In this list these serious conditions, incurable without operation, and unsuspected in the majority of instances, represented 31.6 per cent. of all patients operated on. This is the most instructive and startling thing about this analysis. Nearly one-third of all the cases in which operation was performed were complicated with conditions very liable to prove fatal. This does not take into consideration serious symptoms, the size of the tumors and the various degenerations which are not necessarily fatal, and which are set forth in the same table.

When we take into consideration symptoms, as shown in his 200 cases, we have interesting food for contemplation. Dangerous hemorrhage occurred in 41 cases, or 20.5 per cent.

Whether or not it is antecedent sterility that is the important causative factor in the growth of fibroids, or whether the fibroid condition is the cause of the sterility, the fact remains that fibroids are often found complicating pregnancy. The management of a pregnancy, so complicated, depends on the size and situation of the tumor. This increase in size of the tumor is due simply to its taking part in the hypertrophy common to the uterus.[8]. During pregnancy fibroids almost invariably become flattened.

"The most important or most fortunate change which may take place in the fibroid, irrespective of whether or not it is interstitial, subserous or submucous, is the development of edema with resulting softening."

This allows a subserous tumor, if situated within the pelvis, to slip out past the presenting head, causing the disappearance of apparently hopeless obstruction, and allowing a normal delivery; or it may be compressed into a thinner and broader mass and thus allow the free passage of the child.

After the labor, the fibroid again resumes its prominent shape.

In the great majority of cases, the fibroid in the latter months of pregnancy so changes its location as to

14. N. Y. Med. Jour., June 17, 1905.

leave the pelvic canal free for the passage of the fetus.

Remarkable examples of this are reported in cases in which the tumor filling the whole of the true pelvis has risen spontaneously out of the pelvis and normal labor has occurred.

Hamilton[15] records a very rare case, in which he was called to a woman after labor, in whose uterus the presence of two subperitoneal myomata had already been diagnosed. Dr. Scott had delivered the child and placenta without difficulty, but some twenty hours afterward was sent for in a hurry, on account of the sudden collapse of the patient. He diagnosed intraperitoneal hemorrhage and sent for Dr. Hamilton. The patient was blanched and restless, the abdomen was tympanitic, and an area of dullness had rapidly formed in the right flank.

Abdominal section was performed, and on opening the peritoneal cavity a large quantity of blood escaped. In searching for the source of this bleeding, a ruptured vein of large size was found on the surface of one of the subperitoneal myomata, from which blood was freely escaping. The myoma was enucleated.

Examination showed that a piece of omentum had become adherent to the capsule of one of the tumors. Uterine contractions had probably separated this omental attachment and opened the vein. Good recovery ensued. He mentions that six members of this patient's family had suffered from myomas of the uterus.

Fibroids rarely become necrotic during pregnancy, but cases sometimes occur in which the tumor breaks down in the center, peritoneal adhesions sometimes form and may cause incarceration and abortion.

Dr. Carmalt[16] reports a very interesting case of complicated uterine fibromyoma. Operation was performed and the patient recovered and subsequently became pregnant.

That portion of the history of the case which is of interest in connection with consideration of danger at deliveries follows:

After three miscarriages, the patient became pregnant in May, 1902. By that time it was apparent that there was a large, rapidly growing fibromyoma or myomata, in the anterior wall of the cervix, and lower uterine segment pressing on the bladder, as well as filling the upper vagina so completely that the cervix could not be reached. The patient declined to have labor induced, and we decided to do Cesarean section whenever labor commenced, the period of pregnancy being very doubtful. Preparations were made and labor commenced, but before the arrival of assistants the uterine contractions lifted the tumor out of the pelvis and drove the child down to the perineum. Although this took place in less than half an hour, the length of the vagina was so great that the child was asphyxiated before I delivered it. Faithful, artificial respiration, hot and cold water, and stimulation failed to restore breathing. The patient's convalescence was uninterrupted, and the tumor (apparently the size of a child's head) shrank to less in size than a small egg. (Afterward it grew rapidly.) Oct. 25, 1903, celiotomy performed. The tumor was found occupying the anterior wall of the uterus, encroaching on the bladder below and extending into the left broad ligament. There was no pedicle, myomectomy was performed and the patient recovered and subsequently became pregnant. She was delivered Sept. 15, 1904, of a 10¼-pound boy.

It is the experience of obstetricians that "labor very seldom finds one of these tumors in the way," and this should make us conservative about operation during the latter months of pregnancy unless symptoms of pressure appear.

Dr. Mixter,[17] in the report of the first case in this country of Porro operation for multiple myomata, in which mother and child were saved, reported the condition of the pelvic outlet as follows:

"Examination showed a solid, immovable mass, filling nearly the whole pelvis. The finger could with difficulty be passed between this and the pubes and a partially dilated os could be felt. This in spite of the fact that the woman, while in labor, had travelled a hundred miles to reach the hospital."

Since the report of this case, a large number of similar cases treated in like manner, have been reported by various operators, and suggest that when a diagnosis of tumor is made, the general practitioner should send for his usual operating consultant rather than for other obstetrical help.

The pedicle of a subserous fibroid occasionally undergoes torsion during pregnancy, followed by peritonitis and interstitial hemorrhage. This gives rise to symptoms which may be obscure and accurate diagnosis may be possible only at operation, as in the following case:

Case 5.—Dr. A. A. MacKeen, Whitman, on Dec. 5, 1904, was called to New Hampshire to see Mrs. L., aged 34, who had been married the previous June.

***History.*—She had had persistent nausea and vomiting for three months, and obstinate constipation. She had menstruated last on September 24. She had a violent hemorrhage October 24, lasting only for a few minutes, and followed by intense pain in the lower epigastric region, with great weakness.**

***Examination.*—On examination, Dr. MacKeen found a large mass occupying the posterior portion of the pelvis, immovable or only slightly movable. The os was slightly patulous.**

***Diagnosis and Treatment.*—He formed the opinion that she was probably pregnant and had a fibroid. Possibly an ectopic gestation with early rupture. He had her brought to her home in Whitman. I saw her with Dr. MacKeen on December 10, and performed abdominal section, removing a large pedunculated fibroid from the posterior wall of the uterus. The patient made a good recovery. She was up three weeks after the operation. There was no amount of uterine pain after operation. The constipation was somewhat relieved, and the nausea and vomiting were entirely cured. She had an uneventful confinement on July 4, 1905.**

Fibroids present in a uterus after the age of 40 may give rise to symptoms which are sometimes attributed, before operation, to an increase in size or to a change in the character of the uterine growth. Operations have been repeatedly done under these conditions, and a pregnancy found as the basis for the apparent lighting up of the growth.

One case of mine was of this character, and there appears to be no way surely to escape from this error in diagnosis.

On moral grounds, the induction of labor early in pregnancy has no justification whatever. It is fully as serious as the performance of an operation to relieve the condition which complicates the pregnancy, and in the great majority of cases the pregnancy will continue to term.

CONCLUSIONS.

When there is a history of a well-marked attack of appendicitis in a young woman, operation should be performed as an antecedent to marriage.

With well-marked, acute symptoms, referable to the right iliac fossa, in the presence of pregnancy, operate at once.

15. Australian Med. Gaz., April 20, 1904.
16. Am. Jour. of Obstetrics, January, 1905.
17. Mixter: Boston, M. and S. Jour., Nov. 8, 1888.

The same treatment should be applied when there is gradual increase of marked discomfort in the same region.

Operation should be advised, prior to marriage, if tumors of the uterus or appendages are known to be present.

The treatment of ovarian or uterine tumors, not recognized until pregnancy has occurred, should be governed by the conditions existing in the individual case.

At or near term, an operation may be performed which will remove the condition and, at the same time, permit the delivery of the child.

409 Marlborough Street.

DISCUSSION.

DR. E. E. MONTGOMERY, Philadelphia, is fully in accord with the conclusions drawn by Dr. Donoghue. There is no question, he said, that the existence of an appendicitis in a pregnant woman is a source of serious danger, and the fact that she has had repeated attacks of chronic appendicitis should be an indication for operation in the early stage of the pregnancy. The danger arising from an operation during the period of quiet would be far less than the patient would incur by continuing the possibility of the development of serious complications during the later stages of pregnancy. Dr. Montgomery has operated on such patients a number of times and the majority of them have done well. One woman had to be operated on during the seventh month of pregnancy. She miscarried, but recovered and has since given birth to two children. He also agreed with Dr. Donoghue in regard to operating on myomata. In many cases one can not tell what changes may take place during pregnancy, and unless the tumor is in the pelvis and interferes greatly with the circulation it is better to wait to see whether Nature is not able to lift the tumor out of the pelvis so as to be out of the way at the time of delivery. The presence of a growth of considerable size in the uterus may be the source of considerable trouble during delivery as the result of irregular contraction. Owing to the increased nutrition in the uterus, these tumors also grow rapidly, and sometimes it becomes necessary to operate in the later stages of a pregnancy on account of the discomfort and the danger of loss of life because of the size of the tumor. In cases in which the patient comes under observation prior to the fourth month of pregnancy and the tumor is of good size and situated in the lower arc of the uterus, it is preferable to open the abdomen and to enucleate the growth. Dr. Montgomery has done this in five patients, all of whom went on to term and were delivered without any unpleasant symptoms; nor did they suffer any discomfort or inconvenience during the convalescence. He also agreed with Dr. Donoghue that when an ovarian tumor complicating pregnancy is below the uterus it is certain to be a source of difficulty in the delivery. It may be possible to evacuate the contents of the tumor through the vagina, but by so doing the patient is subjected to several dangers. Its contents may be of such a character as to give rise to a serious peritonitis complicating the puerperium. It may be of the papilliform variety. If the tumor does not rupture, the pressure to which it is subjected may cause necrosis and the development of serious trouble during the puerperium requiring operative interference and endangering the life of the patient. For these reasons, if the tumor is situated in the pelvis below the developing uterus, the operation should be done as early in the pregnancy as possible. The danger to the patient is less than if we wait to see what Nature will do.

DR. CHARLES S. BACON, Chicago, said that he is particularly interested in the matter of ovarian tumors complicating pregnancy, having had some experience with these cases. He thinks that there is no doubt that all ovarian tumors should be removed as soon as they are diagnosticated, with the exceptions made by Dr. Donoghue. The possibility of the rapid growth of the tumor during the pregnancy, which is very common, the danger of pressure symptoms which result from that, and especially the great danger of disturbance of the puerperium, twisting the pedicle and interfering with the circulation, lead to this conclusion. When the tumor is discovered during labor, however, Dr. Bacon is not certain that the advice to operate at once is best. There is a different condition here, and it would seem that large tumors that fill the pelvis can be replaced fairly easily and safely by making use of the knee-chest position or the Trendelenburg posture, with anesthesia if necessary. The tumor usually can be replaced and labor go on. The case must be watched, and, when symptoms supervene, operation should be done. In fibroids, his experience is against operation, even in the early months of pregnancy. The serious complications in fibroids are not so common as one would expect, and very rarely do they become troublesome during delivery. If the tumor is not situated in the cervix or in the lower uterine zone, he thinks it is best to let it alone.

DR. J. H. CARSTENS, Detroit, said that when he was an obstetrician he met quite a few cases of tumors of various kinds in which the patients died during delivery or shortly afterward, and it always impressed him strongly that these tumors should be removed. When he became an abdominal surgeon, he advocated the removal of these tumors, and some years ago he reported a few cases. An adherent tumor in the cul-de-sac can not be replaced; it must be removed, and as early as possible. A fibroid in the broad ligament growing rapidly, as these generally do, must be removed. A fibroid in the lower segment of the uterus or in the cervix, or at about the situation of the internal os, can often be removed through the vagina by lifting it up completely and enucleating the tumor. Of course, in cases of extrauterine pregnancy and appendicitis there is no question about operating during pregnancy. Strangulated hernias occurring during pregnancy must be operated on. Dr. Carstens had about thirty cases of operations during pregnancy, and he has found that women will stand an operation during pregnancy as well as at any other time. In fact, he believes that they usually stand it better. If the fibroid is down deep, a submucous fibroid, one can not tell beforehand how deep he is going down. The tumor may be over the site of the placenta, and the operator may cause some interference with the circulation of the placenta, producing fatty degeneration, and, as a result, an abortion takes place. Many more women die with tumor during pregnancy and labor than die if operated on promptly. Fibroids that are loose and movable and that are located above the brim of the pelvis, or that are subperitoneal, do not interfere with delivery. The woman will be delivered all right, and the tumor can be removed afterward. Sometimes, during subinvolution, these fibroids will be absorbed, but only in very rare cases.

DR. W. B. DORSETT, St. Louis, emphasized the remarks made by Dr. Carstens, and related a case that occurred in his practice three years ago. A woman consulted him, complaining of much pain in the pelvis. She thought she was about three months' pregnant. On examination Dr. Dorsett found an incarcerated uterus, with a fibroid tumor of conical shape behind the promontory of the sacrum. He recognized that the woman was pregnant and operated. After opening the abdomen he lifted the entire mass, tumor and uterus, out of the pelvis, and on examining the tumor he was satisfied that it dipped down deep into the uterine wall, so he thought it best not to remove it. The woman went on to term and was delivered. The tumor now is not larger than a walnut, so, he thinks, we ought to speak conservatively about enucleation of fibroid tumors during pregnancy, because one can not always tell how deep they dip into the uterine wall. He operated not long ago on a case of ovarian tumor cyst in which pain was severe and that really demanded operation. The case had been deemed one of appendicitis for a number of years. He removed a small cyst from the right side. The woman recovered from the operation, but aborted in the fourth month. Conservatism should guide us in these cases in which fibroids complicate pregnancy.

DR. F. D. DONOGHUE said that surgeons see so many end results of these cases following delivery, especially cases of sloughing fibroids with such a high mortality, that they are apt to be more radical in advising interference than the obstetrician, who only occasionally has a fatal case. Regarding the treatment of the cyst by puncture, in the last seven years

Dr. Donoghue has never punctured an ovarian cyst. Malignant disease of the peritoneum is not uncommon following the puncture of a cyst which may appear benign. The danger of the large incision is much less than the danger of dissemination papilloma of the ovary by puncture.

NERVOUS AND MENTAL MANIFESTATIONS OF PRE-PERNICIOUS ANEMIA.*

F. W. LANGDON, M.D.
CINCINNATI, OHIO.

Most practitioners of wide experience have probably been puzzled at times by a class of patients presenting an anomalous grouping of general and nervous symptoms, which have passed from one physician to another; perhaps labelled as "general debility" by one, "neurasthenia" by another, "crankiness" by a third, "hysteria" by others; cases which steadily progress toward a fatal termination in spite of supporting treatment, "rest cures" and optimistic prognoses.

Occasionally a residence for a more or less prolonged period in a well-equipped hospital, or an accidental falling into the hands of some young "up-to-date" village doctor, leads to a routine blood examination and the surprising discovery is made that the patient has "pernicious anemia."

During the past decade it has fallen to my lot to have under observation a number of such patients, whose chief complaints were of a distinctly mental and nervous character, and who in the course of time were found to present the characteristic blood state and somatic phenomena of pernicious anemia.

In some the nervous and mental departures were attributable to preceding or accompanying blood defect; in others, however, distinct evidence of organic nervous changes of degenerative type preceded the actual development of the pernicious feature of the anemia. These latter cases tend to raise again the questions, which have not by any means been satisfactorily answered:

1. Does the impaired enervation at times lead to morbid functioning in the blood-forming or blood-destroying organs?

2. Does the blood deterioration lead to the nervous phenomena?

3. Is there a common cause for the nervous symptoms and the blood deterioration?

It would seem to me probable that the last question will eventually be answered in the affirmative. In a few cases the opportunity has been offered to follow their development from so-called "secondary anemia" to an anemia of "pernicious" type as shown by the blood test.

SYMPTOMATOLOGY.

Analyzed clinically these cases collectively have seemed to present a rather characteristic syndrome, the occurrence of which may be of diagnostic and prognostic import.

In its full development, this syndrome may be characterized as follows, though individual cases may be incomplete as regards one or more symptoms, as would naturally be expected:

1. General ill health.

2. Mental symptoms, viz., loss of inhibition, peevishness and gradual mental deterioration, varied however, by control, patience, good temper, etc., for longer or shorter intervals.

Two of my cases, both women, presented this variability to a remarkable extent, the mental picture changing abruptly for better or worse within a few hours.

During the "better" periods some patients are almost "angelic" in disposition and conduct.

One patient had a distinct history of auditory hallucinations.

3. Sensory disturbances: (a) Subjective, consisting of intramuscular and articular pains. The former are never, in my experience, of "lightning" character as in tabes, but rather of the nature of "aches" or dull pains.

The articular pains are seldom accompanied by effusions and never by true inflammatory action, heat, redness, etc.

Other subjective sensory complaints which are perhaps more frequent than the above are sensations of numbness, tingling and weight in the extremities, usually more marked in the feet and legs. These symptoms, with the ataxia noted later, have occasionally led to an erroneous diagnosis of tabes, as in Case 1.

(b) Objective sensory disturbances: These are common and consist chiefly of losses of tactile and pain sensibility about the feet and ankles; "patchy" in distribution, i. e., not segmental. Sometimes in the earlier stages only delay in transmission of sensation may be found. Tabes is excluded in these cases by the often exaggerated knee jerks and spastic gait, as well as by the absence of pupillary changes.

4. Plus knee jerks, ankle clonus and "Babinski sign" (extensor plantar reflex) are present in some cases.

5. Ataxia of gait and station is often present.

6. Diarrhea of the mucous type is apt to occur sooner or later.

7. The peculiar "lemon yellow" tint of pernicious anemia occurs in the advanced stages.

A combination of all or a majority of the above symptoms should suggest the possibility of an anemia of pernicious or prepernicious type and a careful blood examination may lead to a correct diagnosis and prognosis.

Case 1.—Mrs. J. S. M. was seen Sept. 12, 1898. She complained of peculiar feelings in fingers and feet, with stiffness of legs, all of two years' duration.

History.—A diagnosis of locomotor ataxia had been made. This was negatived by the entire absence of either Argyl Robinson pupils or lightning pains and the presence of hyperactive knee jerks. The patient's father died of consumption, her mother was epileptic. The patient had been married sixteen years, but had never been pregnant. Syphilis, alcoholism lead and diabetes were excluded in the history. She had been sent south for lung disease in adolescence, with resulting recovery.

Examination.—Woman under average height; general nutrition apparently fair, distinctly anemic to the eye; pulse 96, small; no heart lesion. She was mentally logical, but apprehensive, and was emotionally depressed. There were no cranial nerve palsies or defects; no lightning pains; no defect of pain sense at ankles and feet.

Motor Powers: Patient can walk fairly well. Her gait is ataxic and slightly spastic. Legs "draw up" at night and knees are tightly flexed when she awakes.

Grasp: R. 45 kilos., L. 32 kilos., by Matthieu dynamometer (estimated at about 60 per cent. of normal). There was some ataxia of hand and arm movements.

Reflexes: Triceps was superactive and wrist jerks active. Knee jerks were present, slightly exaggerated.

Remarks.—A diagnosis of "probable combined sclerosis" of Putnam-Lichtheim-Dana type was made. Opportunity for blood examination was not obtained, as the patient was going away to a health resort, where she gradually lost strength in

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-sixth Annual Session, July, 1905.

spite of careful supporting treatment, and died in about three months.

The physician, under whose care she was, writes me that he concurred in the diagnosis of "combined sclerosis," and that the reflexes toward the end were "practically entirely lost."

While the diagnosis of pernicious anemia in this case may justly be open to criticism, owing to the absence of blood examination, yet the clinical features, evident anemia, the steady deterioration in strength and the fatal issue in a little more than two years, together with the absence of other disease of lethal nature, would all seem to render the presence of the morbid blood state extremely probable.

CASE 2.—This case has already been reported in THE JOURNAL, March 2, 1901. A brief abstract is as follows:

History.—A. W. C., male, aged 34, American, married, no children, hospital supervisor and restaurant proprietor by occupation, was under observation from July, 1899, to the fatal termination of his illness in April, 1900. There was a history of three or four years' gradual failure of health, preceding actual illness.

Examination.—Syphilis was excluded. His habits were good. He complained of weakness and rigidity in legs, and was unable to walk without assistance from others.

Sensory and Motor Symptoms: There were defects of tactile and pain senses about ankles, and delay and hypesthesia in both, without actual anesthesia. There was motor weakness with rigidity of legs and inability to walk. There was also inco-ordination in the upper and lower extremities.

Reflexes: Knee jerks were plus. Ankle clonus was present on both sides. Plantar reflexes were of the distinct "Babinski" type.

There was no notable mental defect until twenty-four hours before death, when coma appeared.

Mucous stools were a marked symptom during the last few weeks. Also epistaxis.

Blood Counts, July 8, 1899 (Dr. M. A. Brown): Reds, 1,279,440; whites, 3,600; hgn., 32 1/6 per cent.; color index, 1.3; poikilocytosis, marked; nucleated reds numerous; megaloblasts more numerous than normoblasts.

Second Count, Feb. 13, 1902 (at pathologic laboratory, City Hospital): Reds, 1,661,805; whites, 3,000; hgn., 54 per cent.; color index, 1.54; eosinophiles, 9 per cent.; neutrophiles, 49 per cent.; small lymphocytes, 39 per cent.; large lymphocytes, 3 per cent.; piokilocytosis was not marked; megaloblasts, three seen.

Subsequent examination showed no material change.

Autopsy.—Autopsy and microscopic investigation by Dr. Wolfstein showed the typical cord lesion of Putnam-Dana type of combined sclerosis.[1]

CASE 3.—J. W. D., man, aged 34, single, active business man, was seen Jan. 7, 1898, in consultation with Dr. G. W. Wire of Wilmington, Ohio.

History.—He has complained of "tired feeling" for past two months. He had a crop of "dry boils" from waist to knees, about three months previous to this examination. Family history is good. There is no syphilis. Anemia was evident. Bilateral hydrothorax was present. There was no ataxia or rigidity of limbs present and no defect of tactile or pain senses was noted.

Reflexes: Knee jerks were lively. Ankle clonus was absent. Plantar reflex was not noted.

Blood Count (Dr. W. E. Schenck): Reds, 1,200,000 (4 counts); whites, 4,000; hgn., 35 per cent.

Subsequent History.—I am indebted for the subsequent history of the case to Dr. Wire, who writes me that the patient did fairly well for five or six months, then rapidly weakened, but was not absolutely confined to his home until seventeen days before his death on Nov. 26, 1898.

Death was due to cerebral hemorrhage, preceded by retinal hemorrhages, which abolished vision.

CASE 4.—C. H. L., aged 57, business man and capitalist, married, four children, was seen April 18, 1903, in consultation with Dr. J. H. Landis.

History.—Family history was good. His habits were good. There was no syphilis and no previous illness of consequence. He complained of peculiar feelings in hands ("as of cornmeal on them") and in feet (as if resting on a sponge). The duration of these symptoms was six months.

Examination.—He had a large frame, full habit; height, 6 feet; weight, 212 pounds. He was moderately anemic to the eye. Heart sounds were not sharp. There were no urinary symptoms. Pupils responded to light, but somewhat sluggishly.

Motor Apparatus: There was no palsy; no inco-ordination. Power was reduced in grasp, i. e., R. 66 kilos., L. 60 kilos (normal estimated at about 90).

Re-examination twelve days later showed R. 75k., L. 60k. by same dynamometer.

Sensation: There were no losses of tactile or pain senses and no obvious delay in transmission.

Reflexes: Knee jerks were good and equal.

Blood examination (Dr. W. E. Schenck): Reds, 3,016,000; whites, 6,400; hgn., 60 per cent.; color index, 1 per cent.; differential count; polymorphonuclears, 80 per cent.; young, 16 per cent.; eosinophiles, 4 per cent.; the reds were irregular in shape and size. Diagnosis was secondary anemia (erythrocytemia).

Subsequent History.—Patient was put on iron, arsenic and supporting treatment and sent to the seashore, where he appeared to improve for a time. Growing worse later, the blood was re-examined and a diagnosis of pernicious anemia was made.

Blood Examination, March 2, 1904 (Dr W. E. Schenck): Reds, 1,000,000; whites, 4,360; hgn., 25 per cent.; color index, 1.5 differential count, whites, polymorphonucleara, 81 per cent.; small lymphocytes, 16; large lymphocytes, 3; poikilocytosis, chromatophilia, microcytes and macrocytes.

Diagnosis: Pernicious anemia.

At this time Dr. Landis informs me there was spastic gait, plus knee jerks, and "Babinski" plantar reflexes; also some diarrhea of mucous type and loss of control of rectal sphincter with retained power over bladder. There were no mental defects. The fatal termination occurred about one year from the time of his first visit.

CASE 5.—A. H., financier and man of affairs, aged 67, very active, married, with several children living and healthy, was seen in June, 1902, in consultation with Dr. H. K. Dunham.

History.—His only complaints were of numbness and coldness in fingers (both hands), and pain in right shoulder. He called it rheumatism. His pulse was intermittent and arythmic and of low tension. The arteries were tortuous. There was no cardiac bruit, but the valve sounds were not sharp.

A diagnosis was made of neurasthenia and failing heart. Prolonged rest and retirement from active business advised.

Thirteen months later there were inco-ordination and weakness in legs, with some rigidity. There was lowering of the tactile sense in legs and ankles, but no anesthesia.

Eight months later there was marked lowering of tactile sensibility below the knees. Actual patches of anesthesia were present.

There was marked ataxia of gait and station, with loss of articular and posture sense in feet and toes, and eventual inability to walk alone.

Blood Examination.—A blood examination about this time revealed: Reds, 2,500,000; whites, 10,000; hgn., 55 per cent.; C. I., 1.1 per cent. A few days later the reds were 2,068,000; whites, 9,600; hgn., 54 per cent. Six nucleated reds in a leucocyte count of 500.

Remarks.—A diagnosis of probable pernicious anemia was made. The case terminated fatally about two years after the onset of the first symptoms.

CASE 6.—For the notes of this case I am indebted to Dr A. L. Knight, the attending physician, who, although not consulted about the case until a few weeks before death, made a prompt and correct diagnosis.

Patient.—Mrs. F. S., widow, aged about 30, two children, had been in failing health for some months. There was no syphilis, but marked anemia with lemon yellow tint of skin. There was general weakness, but there were no mental defects and no sensory or reflex losses.

Blood Examination (Dr. W. E. Schenck): Reds, 1,500,320; whites, 4,200; hgn., 45 per cent.; color index, 1.5 per cent.

1. See THE JOURNAL, March 2, 1901.

Differential Count: Adult whites, 64 per cent.; young, small, 17 per cent.; young, large, 14 per cent.; transitional, 1 per cent.; old eosinophiles, 1 per cent.; unknown, 3 per cent.; reds, normoblasts, 1,500; megaloblasts, 102; microblasts, 33; poikilocytosis present.

CASE 7.—Mrs. A. S. H. was referred to me by Dr. W. M. Seamans of Delaware, Ohio. She was under my care at the Cincinnati Sanitarium from Nov. 1, 1904, to the date of her death, Dec. 28, 1904.

For some of the notes of case I am indebted to my associates, Dr. B. A. Williams and Dr. C. B. Rogers.

Complaint.—Diarrhea and nervousness of three months' duration.

Patient.—A married woman, aged 62, who has never been pregnant. Her father died of "heart disease." Her mother is living and in good health at over 80 years of age. Patient is the second of three children. There is no nervous disease in direct family.

Previous History.—Patient was under treatment at a private institution for "mental disease" ten years ago. Recovery was followed by "nervousness and irritability for years."

Examination.—Nov. 1, 1904: General development is fair, good complexion and teeth. Patient is somewhat emaciated. Mentally she is cheerful and bright, with good memory, and is hopeful. These conditions present day of examination were quite in contrast with her dispositon at other times, which is not at all amiable.

Heart and urine were negative. There was no cranial nerve palsy and no contraction of visual fields to rough test. Pupils responded promptly to light and accommodation tests.

Motion: She can walk with some assistance from others; gait is stiff; her fingers are stiff and movements slow in consequence.

Sensation: Pain sense is blunted or lost about wrists and ankles (to a pin prick). There is tactile anesthesia of feet and legs nearly to knees. Heat and cold senses are delayed, but usually correct.

Reflexes: Knee jerks are absent. Plantar reflexes flexor, but very slight.

Blood Counts (Dr. W. E. Schenck), Nov. 8, 1904: Reds, 2,248,000; whites, 1,500; hgn., 30 per cent.; color index, 0.70

Differential Count: Leucocytes, polymorphonuclears, 83 per cent.; young, small, 10; young, large, 6, 16 per cent.; eosinophiles, 1 per cent.; poikilocytosis, macrocytes and microcytes.

A diagnosis of secondary anemia was made.

Second Count, Nov. 21, 1904: Reds, 1,456,000; whites, 5,000; hgn., 30 per cent.; color index, 1.07; poikilocytosis.

Differential Count: Polymorphonuclears, 57 per cent.; small lymphocytes, 42 per cent.; large lymphocytes, 1 per cent.

A diagnosis of pernicious anemia was made.

Third Count, Dec. 6, 1904: Reds, 1,004,000; whites, 2,400; hgn., 30 per cent.; color index, 1.5.

Differential Count: Polymorphonuclears, 65.5 per cent.; young, small, 33.5; young, large, 15, 34 per cent.; eosinophiles, .5; poikilocytosis, chromatophilia, macrocytes, microcytes.

A diagnosis of pernicious anemia was made.

Fourth Count, Dec. 20, 1904: Reds, 1,268,000; whites, 3,600; hgn., 30 per cent.; color index, 1.2.

Differential Count: Polymorphonuclears, 62 per cent.; young, small, 36, young, large, 2, 38 per cent.; poikilocystosis, chromatophilia, macrocytes, microcytes.

A diagnosis of pernicious anemia was made.

Termination by exhaustion five months after onset of symptoms.

CASE 8.—Mrs. A. P. C. was referred to me by Dr. Sutton of Aurora, Ind. The patient was under the care of myself and associates at the Cincinnati Sanitarium from Jan. 19, 1905, till her death, on Feb. 1, 1905.

Patient.—A woman, aged 48, the youngest of several children, married, one son, 16 years old, one miscarriage at 46 years, lues probable, complains that she "feels cold all the time," has pain in left hip.

History (from others).—The patient has been mentally "peculiar" for two years, "heard voices" once (auditory hallucinations). She has threatened suicide. She has loss of control of sphincters at times and there is general weakness.

Examination.—She is evidently extremely anemic and has lemon yellow skin. She is conscious only when aroused; does not speak, but nods head. Pulse, 130; respiration from 35 to 40; temperature, 100. There were no chest râles. Pupils were pin points; sphincters unreliable; knee jerks were absent; plantar reflexes, right flexor, left absent; there were no responses to pin pricks in lower extremities.

Blood Examination (Dr. W. E. Schenck), Jan. 24, 1905: Reds, 2,272,000; whites, 2,400; hgn., 38 per cent.; color index, 86; macrocytes and microcytes.

Differential Count: Polymorphonuclears, 71 per cent.; small lymphocytes, 23 per cent.; large lymphocytes, 3 per cent.; eosinophiles, 1 per cent.; myelocytes, 2 per cent.; total, 100 per cent.

A diagnosis of severe secondary anemia was made.

Second Blood Examination, Feb. 1, 1905: Reds, 2,412,000; whites, 4,200; hgn., 35 per cent.; color index, 0.73.

Differential Count: Polymorphonuclears, 76.5 per cent.; lymphocytes, small, 21, large, 2.5. Normoblast, one.

A diagnosis of secondary anemia was made.

Remarks.—While this case does not technically come within the limits of a "pernicious" type of anemia, as shown by the blood tests, yet there can be little doubt of the presence of a lethal blood state to which the fatal termination was due.

CASE 9.—R. M. J., broker, single, was originally referred to me in June, 1898, by Dr. G. M. Allen, on account of a hemiplegia.

History.—My diagnosis at the time was of cerebral thrombosis of gummatous origin. Recovery was nearly complete, after some months, with only slight exaggeration of reflexes in the paralyzed side. I saw him subsequently at intervals of months, up to 1905. During this period he suffered from several attacks of aphasia and monoplegia, three or more convulsive attacks, all clearing up within a few hours or days, and leaving a slight but persistent mental weakening.

He still continued to do a certain amount of routine business, and his mental deterioration was not marked to a casual observer. In the early part of 1905 he passed from my observation, for several months, and I was informed that he was taking some form of manual treatment.

After this he was bed-ridden and comatose much of the time, and came under the care of Dr. Joseph Eichberg, who has kindly favored me with the following notes of the case while under his treatment:

"Blood examination of Mr. J.: Reds, 800,000; whites, 6,400; hgn., 20 per cent.; color index, 1.25 per cent.

There was marked poikilocytosis. One large megaloblast was found in several fields. The patient died within three and one-half weeks of the time that I first saw him."

Remarks.—The long duration (seven years) of nervous symptoms of varied type preceding the development of anemia is notable—not, however, because of any likely connection of the two, since the history pointed rather distinctly to gummatous arteritis as the cause of the organic nervous state.

DISCUSSION.

DR. DAVID I. WOLFSTEIN, Cincinnati, declared that this attempt to establish a prepernicious anemia is going too far and is bound to lead us into trouble, especially as pernicious anemia is a disease that is well known and in which the blood examination is very definite. One can hardly see how disturbances of sensation and inco-ordination can be considered prepernicious anemia. In his desire to establish a separate entity, Dr. Langdon has included cases that would be classed as cases of subacute degeneration of the cord, which we class as pernicious anemia. There ought to be very little difficulty in diagnosing this condition with the laboratory aids now at our disposal. Prepernicious anemia is almost a contradiction in terms. There are a great many nervous states, it is true, that might be produced by various forms of anemia, but Dr. Wolfstein has never seen anything except very severe secondary anemia, or a simple pernicious anemia, unless there was some condition in the blood findings that would account for it, that would produce so well-marked a clinical picture as Dr. Langdon presents.

DR. H. A. TOMLINSON, St. Peter, Minn., said that behind the anemia there is the instability of the individual. In these cases we are probably dealing with a secondary anemia, having its origin in chronic autointoxication; in other words, an intoxication anemia. A careful study of these cases clinically will show that behind the autointoxication there is faulty elimination. After correction of the faulty elimination, and under improved nutrition, the anemia disappears. In the majority of cases of chronic nephritis, in which there is marked sensory and often motor disturbance, there is secondary anemia, and all the manifestations described by Dr. Langdon. Dr. Tomlinson agreed with Dr. Wolfstein that there is no ground for grouping these manifestations into a special classification, because they may result from a number of disease conditions. We have no right to ascribe to the anemia the power to cause the nervous disturbance.

THE TUBERCULOSIS PROBLEM IN LOS ANGELES.*

GEORGE H. KRESS, M.D.
LOS ANGELES, CAL.

The mortality statistics for pulmonary tuberculosis for the city of Los Angeles, when analyzed, suggest some rather interesting questions, not only for the physicians and citizens of Los Angeles, but for our professional brethren east of the Rocky Mountains, since it is these latter gentlemen who are largely responsible for the fact that Los Angeles has a tuberculosis problem. It is the purpose of this paper to consider various phases of these statistics, to draw some conclusions therefrom and to suggest some measures whereby such danger as exists for the public health from an unusually high mortality rate from pulmonary tuberculosis may be minimized or entirely prevented.

In order that the task may be accomplished with some degree of completeness, most of the etiologic factors that are known to influence the morbidity and mortality rates of the great white plague will be considered in turn.

FACTORS INFLUENCING MORBIDITY AND MORTALITY RATES.

Climate.—We who live in this country and know its many advantages, need not be told that the pure air coming from ocean and desert, the good soil drainage, the great amount of sunshine, the temperature which, while pleasant and equable, varies sufficiently during the day and night to be anything but enervating, are atmospheric and topographical conditions not favorable to either the development or the spread of consumption under ordinary conditions.

So far as the value of our climate may be called into question as regards the treatment of tuberculosis, we have but to remember that, in a general way, there is no such thing as a specific climate for the cure of tuberculosis; that it is the manner, rather than the place of, treatment that is of first importance; that the disease has been cured, in fact, in climates of widely different characteristics, and that the Southern California climate, in allowing an out-of-door life the year round, in a pure atmosphere, with an abundance of sunshine, possesses advantages excelled by but few localities. So that what may be said later concerning a large mortality rate from tuberculosis in Los Angeles exists not because of, but rather in spite of, a climate, which with proper cases, under suitable conditions, would and does exercise a potent influence in the cure of many, many patients.

Sociologic and Industrial Conditions.—Our northern friends and some few others at various times, in prognosticating the industrial growth of our prosperous city, have been in the habit of saying, "Los Angeles has nothing and exists on nothing else than its climate and its tourists." Taken literally, such an assertion is, of course, a great exaggeration, but there is this kernel of truth within it, that Los Angeles has, for a city of its size, not nearly the number of manufacturing interests that are found in many eastern municipalities of the same population.

With this apology for the use of dry figures, the ordinary causal factors of consumption will be considered in turn.

STATISTICS.

The statistics here given have been taken largely from the last United States Census reports and from the death certificates on file in the City Health Office. While allowance must be made for slight errors, since all the items on the death certificates are not invariably filled in by physicians, they are, in the main, correct. The registration area of the United States contains about 40 per cent. of the population of the country, and, as it has much more accurate methods of keeping vital statistics, its figures are, therefore, taken in preference to those for the United States as a whole.

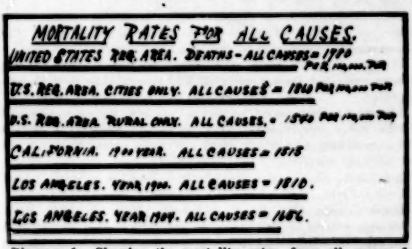
MORTALITY RATES FOR ALL CAUSES.
UNITED STATES REG. AREA. DEATHS - ALL CAUSES = 1700
U.S. REG. AREA. CITIES ONLY. ALL CAUSES = 1810
U.S. REG. AREA. RURAL ONLY. ALL CAUSES. = 1540
CALIFORNIA. 1900 YEAR. ALL CAUSES = 1518
LOS ANGELES. YEAR 1900. ALL CAUSES = 1810.
LOS ANGELES. YEAR 1904. ALL CAUSES = 1864.

Diagram 1.—Showing the mortality rates, from all causes, for the United States and Los Angeles. It will be seen that in spite of having the second highest tuberculosis mortality rate in the United States, the mortality rate for Los Angeles, from all causes, is below that of the average registration cities of the United States.

The following figures show the annual economic loss to the United States from preventable deaths from pulmonary tuberculosis: Annual total number of deaths in the United States from consumption, 150,000; in California, over 4,000; in Los Angeles, over 600. Average age of patient at time of death, 35 years. From one-third to one-half of all deaths between the ages of 15 and 35 are due to tuberculosis.

Average years of after-life expected by man of 35, about 32 years; cost of rearing child to age of 20, at $100 a year for 25,000 persons, $50,000,000; same for 60,000 other persons who die between ages of 20 and 35, $90,000,000; diminished earning power of $150 each for 200,000 sick consumptives, $30,000,000; loss of future savings at $1,000 each of those who die between the ages of 20 and 60, $130,000,000; annual expense of sickness of 150,000 persons, at $50 each, $7,500,000; extra expense of caring for families of 75,000 married consumptives at $25, $1,875,000; grand total in monetary loss to the United States, $309,875,000 annually.

No estimate in dollars and cents is placed on the mental and physical suffering of the patients or their families.

* Read before the Los Angeles County Medical Association June 2, 1905.

These estimates, if anything, err on the side of conservatism. Counting the cost of rearing a child, the loss in diminished wage earnings during sickness, the loss through premature death, the expense of sickness and expense of caring for dependents of deceased consumptives, there is a loss to the United States, on a conservative basis, of more than 300 millions of dollars annually.

All this loss annually from a preventable disease!

The accompanying charts, diagrams and tables have been made to bring out more clearly such etiologic factors as have a bearing on the subject under discussion.

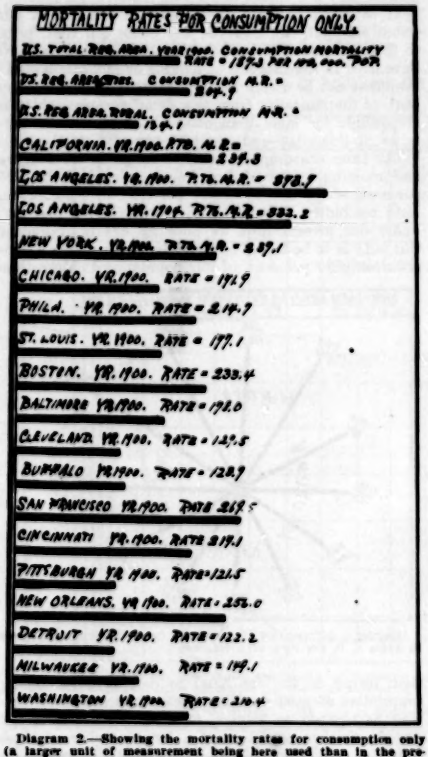
MORTALITY RATES FOR CONSUMPTION ONLY.
U.S. TOTAL REG. AREA. YEAR 1900. CONSUMPTION MORTALITY RATE = 187.3 PER 100,000. POP.
U.S. REG. AREA URBAN. CONSUMPTION M.R. = 204.7
U.S. REG. AREA RURAL. CONSUMPTION M.R. = 154.1
CALIFORNIA. YR. 1900. RTD. M.R. = 239.3
LOS ANGELES. YR. 1900. RTD. M.R. = 373.7
LOS ANGELES. YR. 1904. RTD. M.R. = 332.2
NEW YORK. YR. 1900. RTD. M.R. = 239.1
CHICAGO. YR. 1900. RATE = 191.9
PHILA. YR. 1900. RATE = 214.7
ST. LOUIS. YR. 1900. RATE = 177.1
BOSTON. YR. 1900. RATE = 233.4
BALTIMORE YR. 1900. RATE = 192.0
CLEVELAND YR. 1900. RATE = 137.5
BUFFALO YR. 1900. RATE = 128.9
SAN FRANCISCO YR. 1900. RATE 219.5
CINCINNATI YR. 1900. RATE 219.1
PITTSBURGH YR. 1900. RATE = 121.5
NEW ORLEANS. YR. 1900. RATE = 255.0
DETROIT YR. 1900. RATE = 122.2
MILWAUKEE YR. 1900. RATE = 149.1
WASHINGTON YR. 1900. RATE = 210.4

Diagram 2.—Showing the mortality rates for consumption only (a larger unit of measurement being here used than in the preceding table, to bring out the differences more clearly). The first horizontal black line shows the average of the registration area of the United States. The Los Angeles line, the longest given, is almost twice as great as that for the United States registration area average. Below the Los Angeles lines are given in order the tuberculosis mortality rates and lines for the fifteen largest cities in the country. The Los Angeles rate is larger than that of any of these large cities, where local conditions would lead one to expect high death rates from consumption.

CONCLUSIONS TO BE DRAWN FROM THESE STATISTICS.

To summarize, it is noted that Los Angeles has a climate and topographical environment which, under proper hygienic and sanitary living, is inimical to the development of pulmonary tuberculosis among its inhabitants. The general industrial, sanitary and sociologic conditions of the city are likewise unfavorable to the spread of the disease. Yet, in spite of this, Los Angeles, in the census year 1900, had the second highest mortality rate from pulmonary tuberculosis in the United States.

If the rate has diminished somewhat during the last five years, it may be said with equal truth that the mortality rates of other cities have likewise diminished, especially in the large cities where the campaign for better housing and sanitation for the poor has been vigorously carried on. New York, with its new tenement house laws and park systems, is a case in point.

The consideration of the tuberculosis mortality rate of Los Angeles in relation to such factors as race, sex, age, conjugal condition, season of the year, and so on, brought out no particularly unusual points, other than that the ordinary variations of the United States registration area were somewhat intensified. Most of the variations could be traced to that one feature which is especially responsible for our high death rate, viz., the fact that southern California is known to possess a climate favorable to the cure of tuberculosis, as a result of which knowledge people flock to this region from all parts of the country, too often, however, in such advanced stages of the disease that recovery is quite out of the question. Consequently, the Los Angeles death rate from tuberculosis assumes most undue proportions.

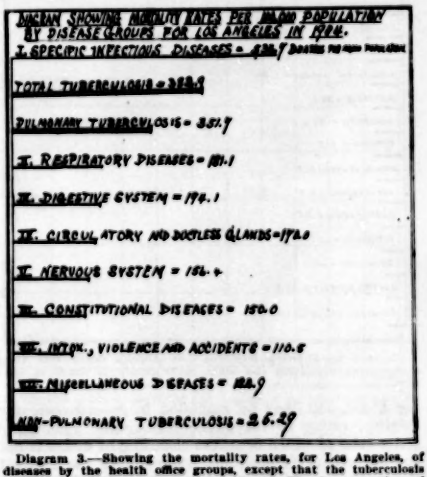
DIAGRAM SHOWING MORTALITY RATES PER 100,000 POPULATION BY DISEASE GROUPS FOR LOS ANGELES IN 1904.
I. SPECIFIC INFECTIOUS DISEASES = 438.7
TOTAL TUBERCULOSIS = 332.2
PULMONARY TUBERCULOSIS = 281.7
II. RESPIRATORY DISEASES = 181.1
III. DIGESTIVE SYSTEM = 174.1
IV. CIRCULATORY AND DUCTLESS GLANDS = 17.8.0
V. NERVOUS SYSTEM = 151.4
VI. CONSTITUTIONAL DISEASES = 150.0
VII. INTEN., VIOLENCE AND ACCIDENTS = 110.8
VIII. MISCELLANEOUS DISEASES = 128.9
NON-PULMONARY TUBERCULOSIS = 26.29

Diagram 3.—Showing the mortality rates, for Los Angeles, of diseases by the health office groups, except that the tuberculosis mortality is added for sake of contrast. The large portion of the line for specific infectious diseases which the tuberculosis line would cover and the much greater mortality from this single disease than for the entire groups of diseases, are both worthy of notice.

There are naturally more deaths among the males, because a larger number of that sex can come here unattended. The large number of deaths among adults is likewise due to the same reason. As yet the comparatively few deaths which occur among the native population of Los Angeles from consumption take place, many of them among the Mexicans and others who live in the poorest circumstances under the worst hygienic conditions.

The table showing the term of residence prior to

death is one of the most significant given. From it is noted beyond any question of argument that from one-third to one-half of those who die of consumption in this city, and who came here in the hope of regaining health and strength, are hopelessly diseased with tuberculosis. For such persons, many of whom die within a few months after their arrival in southern California, death at home, with the tender ministrations of relatives and friends, would be preferable to the hopeless outlook presented here. Forced by the lack of material means to seek lodging in the cheapest rooming houses, unable to purchase nourishing food, without which even the best climate on earth is of but little avail; forced, when their material means are not so limited to conceal the nature of their malady from the keeper of the room-

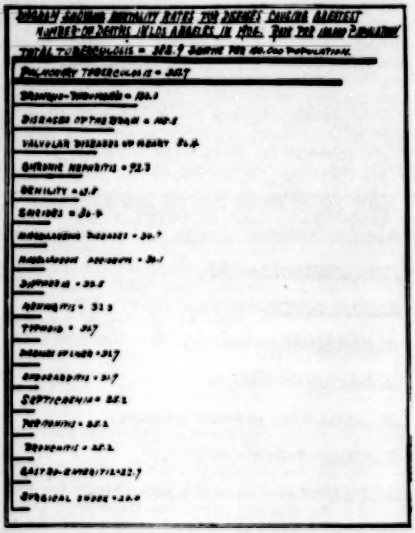

Diagram 4.—Showing how the Los Angeles death rate from consumption outclasses the other main causes of death in that city.

ing house, lest they be requested to go elsewhere for lodging; eating in the public restaurants, among the better class of which even, the cleansing of dishes is not any too well performed, and where among the cheapest this work is decidedly neglected, the lot of these hopelessly advanced victims of consumption is, indeed, hard. Their sufferings terminate somewhat when, bedridden, they are admitted to the County Hospital, where, even though the white-capped nurses be strangers, they may spend a few hours of peace before death.

The following is the tuberculosis mortality on different Los Angeles streets: Hope, 10; Fourth, Hill and Pico, 9 each; Main, 8; First and Twenty-second, 7 each; Alameda, Seventh and Twenty-sixth, 6 each; Aliso, Fifth, Figueroa, Los Angeles, St. Julian and Twelfth, 5 each; Avenue Sixth, 4; Boyle, Castelar, Eighth, Grand, Girard, Maple, Soto, Spring, Third, Twenty-first, Twenty-eighth, Vermont and Wall, 4 each; Avenue Five, 4; Buena Vista, Central, Elizabeth, Fifteenth, Flower, Marchessault, Pasadena, Ruth, San Fernando, Santa Fe, Sickle, Sixth, Temple, Tennessee, Twenty-third and Twenty-fifth, 3 each, and so on; County Hospital, 118; coroner, 34.

One hundred and eighteen deaths from consumption in the Los Angeles County Hospital last year! Thirty-four deaths in rooms and lodging houses, without a physician in attendance, so that a coroner's inquest was necessary! The Associated Charities yearly provide transportation to an additional hundred or so of consumptive persons to enable them to return to their homes because they are unable to keep up the struggle here.

If so many patients die as charity patients in our public hospital, can there be any doubt but that, prior to their admission to that charity institution, they must have lived in the cheapest of lodging or rooming houses? Would it not be a safe assumption to state that 25 per cent. of the mortality from this dread disease—which is responsible for more than one-fifth of the entire mortality of this city—and about 50 per cent. of the morbidity from consumption is to be found in the lodging and rooming houses of Los Angeles; in brief, that 25 per cent. of the deaths and 50 per cent. of the tuberculosis morbidity (whatever this latter figure may be; under our present laws we have no means of finding this out) is to be found in those dwellings which harbor about only 30 per cent. of our population? More than

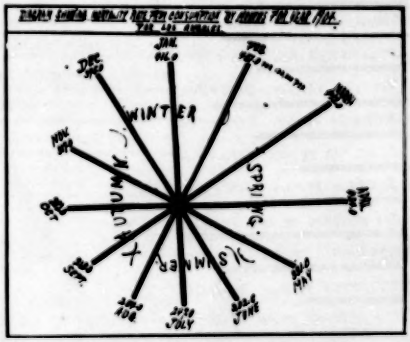

Diagram 5.—Presenting the mortality rates by months, as given in Table 6, in the form of a diagram.

that, owing on the one hand to the prejudice among proprietors of good dwelling houses to accept such persons as tenants or lodgers, and, on the other, to the poverty-stricken condition of a large number of these patients, it is reasonable to assume that the proportion of consumptives to the poorer lodging houses is much larger than this. If this be true, it means that in the places where the largest number of poverty-stricken, poorly nourished and depressed men are to be found; in the buildings where the amount of cubic air space is least; where ventilation is prevented to keep up body heat and to avoid draughts; in the dwellings where the bed clothing is filthiest, where bath tubs and lavatories are the fewest and then of the crudest pattern; in short, where bad hygiene, worse sanitation, and the largest number of predisposed persons are congregated in the smallest space (precisely those conditions most potent in the spread of this disease), we find the largest number of consumptives, and not only that, but the largest number of consumptives in advanced stages of the dis-

ease, that stage in which millions of bacilli are cast off by each patient in his sputum of a single day.

On what premises and by what process of reasoning are we warranted in concluding that, under such lodging-house conditions, tuberculosis does not endanger the public health of our city? When a firebrand is thrown into an inflammable structure, the result that is expected is a conflagration. When foci of infection are scattered in places where predisposed persons can most easily acquire the disease, one expects new cases of the disease to arise. The spread of the disease may be confined for a time to such places, but it does not take long before some of these diseased persons repay their debt to a criminally neglected community by infecting inhabitants in better portions of the city.

By what right does any municipality endanger the life of its healthy inhabitants, especially when this danger to others comes from the violation of the most fundamental laws of decent and hygienic living? What does Los Angeles intend to do in this matter? Shall it close its eyes and allow the next census to publish the same unfavorable mortality rate from consumption? How long will it be, whether justly or unjustly, before it becomes noised abroad throughout the country that our tuberculosis mortality is so excessive as to be a danger to healthy persons?

Los Angeles can account for her tuberculosis death rate without shame to herself. The fault lies much more at the door of those eastern physicians who send hopelessly advanced patients to this community than at the doors of the local physicians. In what manner do we as physicians, and how does this Los Angeles County Medical Association, which is a component unit of the Americal Medical Association, and which is supposed to take an active participation in all efforts to promote the public health, excuse itself for its dereliction of duty?

Is it right that we as physicians should allow this work to be done almost entirely by a half-dozen men, the members of the Board of Health, and more especially by our health officer? Our politicians will not undertake this work, because it conflicts with vested interests that at once make themselves heard when reform is attempted; but let other vested interests, viz., those representing the great mass of our citizens, who stand for decent sanitation and hygiene, be heard with equal force, and our politicians will not turn an unwilling ear.

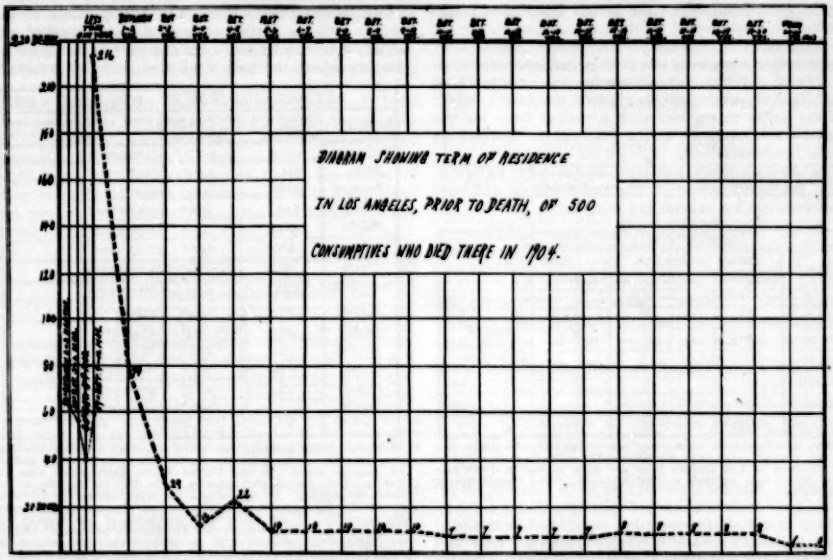

Diagram 6.—This diagram shows the length of residence in Los Angeles prior to death of 500 consumptives who died here in 1904. The high proportion of deaths for the four seasons of the first year is worthy of notice, also the height of the curve for the first year. It then drops rapidly, until about the fifth year, when it runs along at a very low figure. This means two things: One, that a large proportion of patients come here in hopelessly advanced stages of the disease; and two, that after two or three years' residence, the other patients have a fairly good chance for lengthened years of life.

THE SOLUTION OF THE LOS ANGELES TUBERCULOSIS PROBLEM.

The solution of the tuberculosis problem in Los Angeles, while not a complicated one, has ramifications in many directions. It may be worth while to consider the more important of these in some detail.

Compulsory Notification.—Under the present health rules and regulations, our health officer has but little control over the tuberculosis situation, because he is denied the power to execute. This is so serious a problem that the health officer of this community should not only have mortality statistics bearing on tuberculosis, but also should know how much morbidity there is from that disease, and in what parts of the city it is located, so that intelligent action may be taken.

In New York City every physician is obliged to report every case of tuberculosis with which he comes in contact. This information is sent to the health department on a blank devised for that purpose, in which the physician not only gives the name and address of the patient, but states his opinion of the hygienic condition of the patient's surroundings. The patient is supplied with literature informing him how to avoid reinfection of himself (a most important point, in that it leads the patient to observe safeguards for others as well), and how to avoid infecting others, a precaution he is sometimes loth to take until the danger to self is first emphasized. This notification information is for the use of the health department only, i. e., the book is open to the inspection of health department officials only. When charity patients are reported, or when the attending physician states that hygienic conditions are bad, a physician or deputy from the health department investigates and gives needed information and assistance for the betterment of the conditions. From time to time inspections are made to see if these measures are complied with. When these measures are ignorantly or willfully but persistently neglected, the health officer has the power to transfer such a patient from his unhygienic surroundings to the tuberculosis hospital on North Brothers Island.

Los Angeles needs just such a law, only, unfortunately, the health officer in this state has no authority forcibly to send a patient to a hospital.

MORTALITY TABLES BY RACE

RACE	UNITED STATES					LOS ANGELES				
	Population U.S. 1900	Deaths, all causes	Rate per 100,000	Pulmonary tuberculosis	Rate per 100,000	Population, all classes	Deaths, all causes	Rate per 100,000	Deaths, tuberculosis	Rate per 100,000
WHITE	57,028,161	466,683	1,760.1	97,811	369.0	96,848	2,041	1,467.9	332	389.0
TOTAL COLORED	9,185,410	31,447	2,577.9	6,013	492.9	4,738	131	1,655.1	23	671.9
NEGRO						2,131	97	2,274.1	22	1,033.0
CHINESE						2,520	24	1,587.3	10	396.8
JAPANESE									1	246.0

Table 1.—This table shows how much higher is the death rate for the colored races than for the white. The negroes, Chinese and Japanese of Los Angeles have not quite so high a death rate from this disease as their colored brethren of the United States, as a whole.

As is known, tuberculosis has been listed by our local board of health among notifiable diseases. How this voluntary notification has worked out in practice is seen from the health officer's last annual report, where, with 651 deaths from tuberculosis, only 206 cases of tuberculosis were reported, and, although the health department makes free sputum examinations, only 434 specimens were sent in, and of these only 167 specimens gave positive results.

Knowing the opposition of patients and their families to having their cases reported, is it any wonder that physicians avoid much trouble by not reporting them? The solution of this phase of the question lies not in voluntary, but in compulsory notification, and that, as stated, can best be followed out after the Biggs plan of New York, the information being for the health department's use only, no placard being placed on the house; the sole purpose of the arrangement being to protect the patient and his fellow-men, but at the same time to inconvenience both as little as possible.

Such a law Los Angeles should have. Such a law Los Angeles some day will have. Just how long the wait is to be will depend, in good part, on the attitude the medical men of the community take on this question. It is to be hoped that those who would be tempted to oppose compulsory notification will accept the change of heart of New York medical men who at first opposed the Biggs system, as an indication of how experience would cause them to change their own opinion. Compulsory notification of cases would also perform this further excellent service to the anti-tuberculosis cause, in that it would overcome the prejudice of the laity to tuberculosis as a cause of death, so that the true number of those who die from this disease could be more accurately determined. At present, large allowances must be made for error in mortality statistics in this disease. Ultimately also, by necessitating a recorded diagnosis during life, it would be a valuable influence in leading medical men to make earlier diagnoses, i. e., diagnoses in the curable stages.

Compulsory Fumigation.—The health officer of Los Angeles, when a death certificate comes in marked pulmonary tuberculosis, sends out a deputy to fumigate the premises where the individual died, but the fumigator

MORTALITY RATES BY NATIONS. MORTALITY FIGURES BY STATES

NATIONALITY	MORTALITY RATES PER 100,000 POP. U.S. 1900	MORTALITY RATES PER 100,000 POP. LOS ANGELES, 1904	WHERE NATIVE AMERICANS AMONG DECEASED CONSUMPTIVES LIVED BEFORE LOS ANGELES, THEY
TOTAL COLORED	597.9	457.0	LOS ANGELES - 13
IRISH	430.8	249.0	CALIFORNIA - 89
BOHEMIAN	395.2	—	ILLINOIS - 48
SCANDINAVIANS	233.7	390.0	NEW YORK - 27
FRENCH	222.6	168.0	MISSOURI - 27
GERMANY	205.9	230.0	OHIO - 25
CANADA	199.7	398.1	PENNSYLVANIA - 19
UNITED STATES	162.5	270.0	INDIANA - 9
ENGLAND	151.4	202.0	MICHIGAN - 8
ITALIANS	149.7	400	IOWA - 8
RUSSIANS	131.1	650.0	TEXAS - 8
MEXICANS		1722	TENNESSEE - 11
CHINESE		4000	KENTUCKY - 11
JAPANESE		2460	MASSACHUSETTS - 7

Table 2.—This gives in the three left-hand columns the mortality rates by nations, for the United States as a whole and for Los Angeles alone. In the United States registration area the Irish, next to the colored persons, have the highest death rate from consumption. In the column for Los Angeles the mortality rate of the Mexicans is especially worthy of notice. A considerable proportion of the native-born population of Los Angeles who die of pulmonary tuberculosis are of Mexican parentage. In the two right-hand columns may be seen from what states the native-born Americans who died here last year from consumption came. Los Angeles had only thirteen deaths among her native born, and the Californians in all numbered only 89. Illinois sent us 45 consumptives, New York 27, Missouri 27, Ohio 25, and so on.

can do nothing, if the owner or lessee of the building forbids him to enter. This deputy has told me of the different ways in which he is met by the families or friends of the deceased, and has stated that in a number of cases he is denied admission. Los Angeles needs a statute that will make it compulsory to have rooms fumigated after the removal or death of a consumptive patient. The work should be carried on, of course, with as much privacy as possible. The benefit of fumigation would not be helped by undue publicity of the work, with its subsequent gossip of neighbors and the corresponding distress of the family.

A statute should also be passed to prevent the furnishings of the room from being sold to second-hand dealers until after they had been fumigated.

Ordinances to Place Lodging House Licenses on the Same Basis as Dairy Licenses.—In his last annual report the health officer of Los Angeles stated: "We recom-

mend that an ordinance be passed requiring all proprietors of lodging houses to secure a permit to conduct a rooming house, and that any proprietor who fails to furnish clean bed clothing, etc., be refused a permit, and in case he fails to keep or to maintain a clean and sanitary place his permit be suspended." What action has been taken in this matter? The health officer is the executive officer of the Board of Health. Is it right to thrust on him in addition the legislative functions? Is it not the duty of physicians, yes, of a committee of the Los Angeles County Medical Association, to take this matter in hand and make this suggestion of the health officer a reality? Such an ordinance should have provisions as to the amount of air space to each occupant of a room; should provide for an adequate amount of ventilation; should insist on clean bed clothing and furniture; should demand accessible bath and wash rooms and lavatories. Proprietors of places violating the requirements, and who, on notice to clean up, fail to do so, should be punished by withdrawal of license, just as a milk license is withdrawn from a dairyman for an analogous offense.

What objection can there be to such a law? If it be inconsistent for a physician or for a body of physicians to oppose fundamental provisions of cleanliness and sanitation, is it not equally inconsistent, in view of the high nature of their calling and better knowledge of these subjects, for them to make no effort to bring about the adoption of necessary hygienic and sanitary measures?

MORTALITY RATES BY SEX.

SEX.	UNITED STATES REG. AREA. 1900.			LOS ANGELES. 1904		
	POPULATION.	DEATHS FROM ALL CAUSES.	DEATHS FROM CONSUMPTION.	POPULATION.	DEATHS FROM ALL CAUSES.	DEATHS FROM CONSUMPTION.
MALES.	4,925,000	220,000	87,000	51,000	1,000	170.0
FEMALES.	5,000,000	200,000	71,000	39,000	700	170.0

Table 3.—This table shows that while for the United States registration area the deaths among males are to the consumptive deaths among females, as 8 to 7; for Los Angeles this ratio is about 13 males to 9 females.

Building Regulations.—We can all become indignant over the cheapest lodging houses, forgetting that, because of this very cheapness, they offer a roof to sleep under and a space to lie on for those unfortunate members of our community who have no means to turn to something better. Some of these shacks have existed for years.

To extirpate an established evil is always difficult. What is being done to prevent the erection of like places? The new building ordinance (No. 10,415, New Series) went into effect on Dec. 31, 1904, and its forty-two articles extend over more than three and one-half full pages of the *Los Angeles Times* of Jan. 9, 1905. Therein are specifications as to material and mode of construction for private and public buildings of all conceivable descriptions; fire-escape and plumbing requirements are all pointed out, but nowhere is mention made of the amount of air space per occupant nor the amount of ventilation required.

The new building ordinance deals almost entirely with material specifications. This is in keeping with this very material age. We do not know who composed the committee that drew up the specifications, but it would seem that that committee should have had among its members at least one medical man who had given thought to building and other requirements. Such a medical man might have come to the aid of the building inspector when he sought to have a rule passed whereby the number of buildings of frame construction would be limited for certain size lots. Under the present ordinance, a single frame building may not contain more than a stipulated number of rooms or apartments. Nothing is said about the size of the lot. Hungry land and property owners violate the spirit of the ordinance by erecting buildings, each with the maximum number of rooms, a foot or so apart from one another, just enough space to enable them to state that the buildings are separate. The narrow areas between them are excellent flues, and the buildings make splendid fire traps. Where was our medical society when these laws were being adopted? It was conspicuous by its absence, as has been said, or it might have been of aid to our building inspector in having his much-needed regulations adopted.

Building requirements on the subject of air space per occupant, ventilation, lavatory arrangements, plumbing and the like need not necessarily stop with our cheaper lodging houses. Without entering into a discussion as

MORTALITY RATES BY AGE PERIODS.

AGE →	UNDER FIVE YEARS.	BETWEEN 5–10 YRS.	BETWEEN 10–20 YRS.	BETWEEN 20–40 YRS.	BETWEEN 40–60 YRS.	60 YEARS AND OVER.	TOTALS.
U.S. REGISTRATION AREA. DEATHS.	847,532	34,798	62,149	339,240	179,249	241,171.	1,630,139.
U.S. REGISTRATION AREA. CONSUMPTION.	9,000	1,297.	11,944.	62,000.	17,977.	7,777.	105,197.
PROPORTION DEATHS DUE TO CONSUMPTION.	1.01%	3.72%	17.2%	27.8%	11.0%	3.7%	
L.A. REGISTRATION AREA. ALL CAUSES. DEATHS.	874	68	116	777	154	97	
L.A. REGISTRATION AREA. CONSUMPTION. DEATHS.	6	2	21	241	117	21	
PROPORTION DEATHS DUE TO CONSUMPTION.	1.21%	2.7%	20.7%	40.1%	75.7%	65.7%	

Table 4.—This shows the tuberculosis mortality rate for the United States and Los Angeles by age periods. The proportion of deaths for the adult age periods is much greater for Los Angeles than for the United States.

to the probable effect on future generations, of our present-day flat life, we may well ask ourselves what kind of physical beings these compartment buildings in time will produce, and whether children born and reared in such structures, where the ingenuity of man is bent on seeing how he can transform the dwelling house of a generation ago into one or two small rooms, and these, in turn, perhaps into living closets no larger than those used by our grandmothers in storing clothes, will be of a high physical standard? In any case the duty of the present generation is to demand that an adequate supply of oxygen and sunlight be allowed to reach the interior of all classes of dwellings. The thickly carpeted, stuffy, ill-ventilated apartment house or hotel can at times be as much of a disease breeder as the poor hovel or miserable tenement, where such of our fellows as have fallen behind in the life race are of necessity forced to make their homes. If the principle of good ventilation be applicable for the tenement, it should be made applicable to the apartment house and hotel also.

A Municipal Dispensary for Consumptives.—Los Angeles can not avoid the conclusion that a large number of penniless consumptives take up their residence within its boundaries. Some of these patients come here on the advice of eastern physicians. Happily, the general

awakening that has come about through the active antituberculosis warfare of late years has resulted in attention being directed to the evil advice of sending advanced patients far from home; with the establishment of sanatoria in the Eastern States and the wider acceptation of the knowledge that tuberculosis in the early stages is curable in any climate, there will be fewer and fewer of such offenses traceable to our brother physicians in the states east of the Rockies. There will always be a goodly number of consumptives who will come here on their own responsibility. The potent influence exerted by a good climate in the process of cure can not be denied and the victims of consumption will ever seek it. Many come in early stages, but, lacking means, hurt themselves by overwork. Improving their condition and arresting the disease, they imagine themselves entirely well and overdo. As their illness continues and draws on their available funds, they seek cheaper and cheaper lodging and eating houses. The larger proportion who go to the County Hospital to die has already been noted.

MORTALITY RATES BY CONJUGAL CONDITION.

Conjugal Condition	For the United States, 1900				For Los Angeles			
	All Causes	Consumption	Population 15 to 44	Consumption 15 to 44	All Causes	Consumption	Population 15 to 44	Consumption 15 to 44
Single	529,371	94,938			170			149
Married	834,849	98,918			350			297
Widowed	194,899	9,698			91			243

Table 5.—This shows the relation to conjugal condition.

To these poverty-stricken consumptives, citizens of eastern municipalities, rather than those of Los Angeles, the city of the Los Angelenos owes an obligation. First to them as individuals, because to those who are ill unto death and without means it is under obligation to provide advice and aid. They should not be made to shift for themselves. Almost any afternoon, at the office of the Associated Charities in the county courthouse, inquiries are made by one or more of these unfortunates, who, without home or shelter, realize at last that they are ill,

TOTAL DEATHS MONTHLY 1895 TO 1904 FROM CONSUMPTION IN LOS ANGELES.

Months	Jan.	Feb.	Mch.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Deaths in 1895	45	48	51	44	33	33	21	30	25	27	33	40
Deaths in 1896	19	16	16	16	14	7	7	6	13	13	12	14
Total Deaths	59	64	67	60	47	40	35	36	38	40	45	54
Mean Rate for each Year	46.0	48.0	47.3	42.1	33.0	28.2	24.3	23.3	23.2	23.3	27.1	33.0

Table 6.—This shows how the number of deaths from consumption varies during the different months of the year.

indeed, and seek medical advice or transportation back to their old home. Why not put this work on a separate basis; establish a room somewhere, with a dispensary staff, where this class of consumptives can be reached and put on the road to recovery, or, at least, if that be impossible, be so guarded that their presence in this community shall not be a source of danger to healthy citizens.

Antispitting Ordinance.—There can be no doubt about the millions of bacilli that are expectorated by a single consumptive in the course of twenty-four hours. Fortunately, where this is expectorated on streets in the summer season, when the sunshine is at its height, it is soon rendered inoccuous. Not so, however, with the sputum in insanitary lodging houses. No matter what may be the most frequent channels of infection, whether by the respiratory or by the alimentary tract, it is generally conceded that infection from bovine sources is comparatively infrequent, if it exists at all, and that, as a rule, all individuals acquire their disease from other persons. The most frequent medium of transmission is the sputum. Antispitting ordinances are good. Too much publicity can not be given to this danger. Let the ordinance be enforced. More than that, the lodging houses should be made to have signs in prominent places, forbidding expectoration, except in suitable spittoons.

TABLE SHOWING WARD POPULATION, ACREAGE AND MORTALITY for the Year

Wards	Population	Population within City Limits	Ward Population	Density per Sq. Mile	Deaths All Causes	Deaths Consumption	Population 15 to 44	Deaths All Causes	Deaths Consumption
Ward 1	6,859	1%	6,859	3.5	195	90	30%	1,140	263
Ward 2	24,797	11%	8,537	9.9	282	95	30%	1,070	317
Ward 3	22,951	11%	1,913	19.8	196	62	31%	897	99
Ward 4	21,709	11%	3,102	19.8	307	60	19%	1,090	277
Ward 5	21,192	10%	2,799	5.5	241	92	17%	1,110	178
Ward 6	17,117	11%	8,571	9.3	299	69	17%	902	176
Ward 7	23,790	11%	1,192	22.0	287	62	21%	1,294	241
Ward 8	9,201	4%	977	17.3	109	46	32%	1,092	140
Ward 9	14,971	6%	2,997	3.2	122	36	40%	1,190	221

Table 7.—This shows the relation of tuberculosis mortality by wards, to ward population, acreage, density, deaths from all causes, and so on. The crowded Eighth Ward, i. e., the plaza district, excels in both its death rates from all causes and from tuberculosis, that of any other ward. While ward density is greater for Ward 7 by acreage, the dwelling places of Ward 8 are much more densely populated.

If sputum is dangerous on the sidewalk, it is equally and more dangerous in the public buildings, in elevators, in cabs, in streets, in steam railways, in hotels, and in lodging and dwelling houses.

Disinfection of Pullman Cars.—The problem of making the owners of those temporary and traveling lodging

TABLE SHOWING DWELLING CONDITIONS IN LOS ANGELES. Census Year 1900

Size of Dwelling	Dwellings with One Person.	Dwellings with 2-5 Persons.	Dwellings with 6-10 Persons.	Dwellings with Eleven or More Persons.	Totals
Persons Dwelling in	1949.	17,513.	2,772.	— 0%.	22,991.
No. of Persons Dwelling in—	1949.	45,701.	21,219.	12,998	102,477
Year.	1895.	1900.	1900.	1900.	1900.	1900.	1900.	1900.	1900.
	6.5%	57%	32.1%	34.1%	12.3%	12.1%	8.1%	23%	
	1.9%	1.3%	16.4%	63.1%	20.3%	24.3%	12.3%	11.1%	

Table 8.—This gives some figures from the latest United States Census reports, showing how large a proportion of the population of Los Angeles lives in simple dwellings and in boarding houses.

houses known as Pullman sleepers fumigate the berths and furnishings is an intricate and difficult one. If the municipality can not solve it, the legislature should be requested to give the State Board of Health adequate powers in this connection.

Municipal Sanatoria and Hospitals for Consumptives.—New York and Cincinnati have established municipal sanatoria for consumptives. These perform a most excellent work not only through the direct cures, but also in being centers from which a better and wider knowledge concerning the best methods of prophylaxis

and cure permeate the masses. Unfortunately, the poor can not easily be taught to regard these institutions in their proper light. In Los Angeles, by the action of the city council, consumptives can go only to the County Hospital, if we except the endowed Barlow Sanatorium, with its as yet limited number of beds. The council made no effort to abate the dangers in lodging houses, but for the private hospitals, where sputa could be disinfected, stringent rules were laid down. The theory is good, but the council, in its wisdom, if it would have been consistent, should have first turned its attention to the worst offenders, viz., the cheaper lodging houses.

The Los Angeles County Hospital has several wards for bedridden consumptives and a few tents for ambulant cases. As soon as patients get in fair condition, in other words, as soon as the active stage for which they were admitted abates, they are urged to seek quarters elsewhere. The County Hospital does this in sheer self-defense. Its entire equipment could be given over to this disease. It is true that many of these patients should have been treated by other municipalities, but since they are here they must be treated humanely.

With this mild climate, why would it not be a wise and economical thing to model after the plan adopted by Texas? That state found that its prisons had an unusually high mortality from tuberculosis. Dr. Fowler, the prison physician, sought permission to take such consumptive prisoners to the Wynne State Farm, an abandoned state prison farm with buildings. These buildings were turned into a sanatorium, hospital, farm and prison, all in one. The prisoners were treated according to the extent of the disease. Light farming, dairy work and poultry raising were done by those who were able to work. The farm produce more than paid the cost of maintenance of the institution, if the expense of guarding the prisoners be deducted. The lives of many of these men were prolonged or saved, and many other prisoners who would have been their companions in the closed prisons escaped infection; escaped, in fact, a form of murder not within the pale of the law.

With the climate of California, which is equally as beneficent as that of Texas, why could not Los Angeles pursue a similar plan? With no expense for guarding, why could not such an institution, a municipal sanatorium, be made self-sustaining here? A dairy herd, a poultry ranch and a truck garden, all requiring but comparatively light work, could be instituted, and, with proper management, could be put on as self-supporting a basis as the Texas farm. With pure air, nourishing food and good medical supervision, we have the essence, the triad of present-day methods in the treatment of this disease. With these, then, the amount of good which could be done can hardly be estimated. The air costs nothing, the food could be furnished by the labor of the patients, and the other expenses of the institution need not be much.

IN CONCLUSION.

If Los Angeles would prevent the large number of tuberculous sick, who are domiciled within its boundaries, from being a danger to their fellow-citizens, it behooves her to consider some such measures as have been outlined above.

If the physicians of Los Angeles would remain true to the tenets of their profession, it becomes their duty to take a hand in the solution of this problem.

If the Los Angeles County Medical Association, a basic unit of the American Medical Association, would remain true to its own obligations, and true to its major or parent organizations—the American Medical Association and the Medical Society of the State of California—it will aspire to give something more to its members than a didactic or even a clinical course of medicine or surgery, by taking a hand and doing its share in the solution of the many hygienic problems which confront this rapidly growing municipality.

One of these problems is the tuberculosis situation. It has as yet reached no undue danger. It should not be allowed to do so. To call attention to the need of its investigation has been one of the objects of this paper.

THE TRANSPLANTATION OF ORGANS.

A PRELIMINARY COMMUNICATION.*

ALEXIS CARREL, M.D.
CHICAGO.

This operation consists of extirpating an organ, with its vessels, of putting it in another region, and of uniting its vessels to a neighboring artery and vein. If the organ is replaced in the same animal from which it was removed, the operation is called an autotransplantation. If it is placed in another animal of the same species it is called a homotransplantation, while if it is placed in an animal of a different species, the operation is called a heterotransplantation.

The so-defined transplantation completely differs from the well-known experiments of subcutaneous or intraperitoneal grafts of small slices of organs.

LITERATURE.

The literature of the transplantation of organs is not extensive.

In 1901-02 I began experimenting with the view of finding a method of substituting a sound organ for a diseased one, e. g., of treating Bright's disease by replacing the diseased kidney by a normal one, or myxedema by transplanting a sound thyroid gland and securing it a blood supply by arterial and venous anastomosis. These first experiments were made in the Faculty of Medicine of the University of Lyons.

The transplantation of the thyroid gland, with its vessels, was performed on a large dog.[1] The right thyroid gland was dissected and its vessels cut. The largest artery and vein were united by a termino-lateral anastomosis to the carotid artery, and the external jugular vein. The circulation was re-established. It was impossible to observe physiologic results, owing to coagulation, which soon occurred, due to the bad aseptic and technical conditions of the operation.

About the same time the transplantation of the kidney was made.[2] The carotid and the jugular of a dog were dissected and prepared for anastomosis. The kidney, having been extirpated, with its vessels and its ureter, was put into the cervical wound. End-to-end anastomoses of the renal artery to the carotid, and of the renal vein to the jugular, were performed. The end of the ureter was united to a small opening of the skin, located a little above the sternum. On release of the clamps, the circulation was immediately re-established, and seemed thoroughly normal. After a few hours a clear fluid began flowing from the ureter. Per-

* From the Hull Physiological Laboratory, University of Chicago.

1. Carrel: "Les anastomoses vasculaires: leur technique opératoire et leurs indications." 2e Congrès des Médecins de langue française de l'Amérique du Nord, Montreal, 1904.

2. Carrel: "La technique opératoire des anastomoses vasculaires et la transplantation des viscères." Lyon Médical, 1902.

manent results were not observed, on account of septic complications.

In the same year, and prior to this, similar experiments, of which I was then ignorant, were performed by Ullmann.[3] His method was different. He used Payr's tubes for uniting the blood vessels. Definitive results were not observed. In 1903 the same experiment was made by Carl Beck of Chicago, but not published.

In 1905 Florescо[4] continued these experiments. He succeeded in transplanting the kidney into the lumbar region. The urine escaped into the bladder. My technic of anastomosing blood vessels was used with a slight modification. The operation was successful, but the anatomic and physiologic results have not yet been published.

In 1905 several series of experiments were performed by Dr. Guthrie and myself in the physiologic and surgical rooms of the Hull laboratory, in order to study the results of the transplantation of the blood vessels[5] of the heart, of the thigh, of the kidney and of the other glands.[6] I am very glad of this occasion to thank Dr. Stewart for giving me the privilege of performing these researches in his laboratory.

PROBLEMS CONNECTED WITH VISCERAL TRANSPLANTATION.

It is impossible to discuss here all the problems which the question of transplantation of organs raises. We will only consider the most important conditions which are necessary to the nutrition of the transplanted organs.

In case of autotransplantation or homotransplantation, the establishment of a good circulation through the anastomoses ordinarily renders the operation successful. The life of the transplanted organs depends almost entirely on the circulation. If the vessels become obliterated, gangrene destroys the organ. Obliteration can occur very easily. It may be produced by a great many causes; for instance, injury of the endothelium by the forceps, the needles or the clamps of the temporary hemostasis, clots on the perforating stitches, fall of the external sheath in the opening of the vessel, and, above all, lack of perfect asepsis.

The ordinary surgical methods of blood-vessel anastomosis have failed to give successful results in the transplantation of organs. At first I used tubes of magnesium or tubes of "caramel," but without good results. Coagulation occurred. Afterward I found a method of suturing which was often successful. By degrees that method has been improved in such a manner that now obliteration almost never occurs. Dr. Guthrie and I, operating together, obtain practically constantly good results. That very important question of technic being settled, autotransplantation and homotransplantation become almost easy.

The problem of the heterotransplantation is much more complicated. It is well known that the serum of an animal in many cases is toxic for the cells of an animal of another species. The aim of these researches being to determine the possibility of transplanting organs from animal to man, that question is very important. Fortunately, biologic laws are not without exceptions. Perhaps the human serum is not toxic for the cells of some animals. We have some reason to think that organs of the anthropoid apes transplanted on man may not be injured by the serum, for the blood of ape and man are inactive toward each other. Besides, it might be possible to use anticytolytic serums. All these points are unknown and must be experimentally studied.

POSSIBLE RESULTS OF VISCERAL TRANSPLANTATION.

Only a few of the possible results of the transplantation of organs will be mentioned in this paper. We do not want to discuss here the physiologic applications of the method. They are numerous and of considerable importance. Already we have performed several experiments along this line. For instance, Dr. Stewart and I have transplanted the kidney, with reversal of the circulation, in order to study the modifications of the secretion. With Dr. Guthrie, I transplanted one of the kidneys of a dog into the cervical region, and, on the third day after the operation, made a comparative study of the urine secreted by the transplanted and the sound kidney.[7] I performed also the transplantation of the heart of a dog on the carotid and the jugular of another dog. The heart was beating and the blood circulating through it. Dr. Guthrie and I established an arterial circulation through the right inferior thyroid vein of a dog, which had symmetrical hypertrophy of the thyroid glands. Marked changes occurred. Thus it appears that the reversal of the circulation in only one vein of a gland may alter the physiologic processes. The replantation of the thyroid gland was successfully made.[8] Probably our knowledge of the pancreas, the spleen, etc., may be increased by this method.

From a clinical standpoint, the transplantation of organs may become important. Perhaps it will be possible to treat myxedema, idiocy, etc., by transplanting a sound thyroid gland with anastomosis of the thyroid vessels to suitable arteries and veins. In kidney affections the transplantation of a sound kidney may be of benefit. Perhaps, after a complete amputation of arm, leg, or thigh, it may be possible to replant the limb, or another similar limb, if it is procurable.

A great many experiments on animals must be performed before using that method on man. As yet it is impossible to say whether or not the transplantation of organs will yield practical results. It seems possible, and we hope that it may open new fields in therapy and biology.

I wish to thank Dr. Guthrie for helping me in the revision of this paper.

3. Ullmann: "Experimentelle Nierentransplantation." Wien. klin. Wochft., 1902.

4. Florescо: "Conditions de la transplantation du rein. Recherches sur la transplantation du rein." Journal de Physiologie et de Pathologie générale, 1905.

5. Carrel: "Anastomosis and Transplantation of Blood Vessels." American Medicine, 1905.

6. Carrel and Guthrie: "Transplantation of the Kidney. (To be published.) "Transplantation of the Inferior Thyroid Vein on the Carotid Artery, in a Case of Goitre." (To be published.) "Amputation of the Thigh. Replantation." (To be published in the American Journal of the Medical Sciences.)

7. Carrel and Guthrie: "Functions of a Transplanted Kidney," Science, Oct. 13, 1905.

8. Carrel and Guthrie: "Extirpation and Replantation of the Thyroid Gland with Reversal of the Circulation," Science, Oct. 27, 1905.

Consultation.—If the physician is worried and anxious about his case and desires advice from a man who has had more experience in that particular disease, it seems only proper that his brother practitioner should come to his aid as a consultant for a small fee, or for no fee, if none is obtainable from the patient. It is the bond of professional brotherhood that seeks to lessen the mental stress in both instances. Yet consultants have been known, I understand, to refuse thus to relieve the anxiety of a doctor, because the payment by the patient of a certain fee was not possible. There is little doubt that the family physician at times pays consultation fees out of his own pocket in order to do his best for patients with whose straitened circumstances he is familiar.—John B. Roberts.

TRANSPERITONEAL LIGATION OF THE RENAL VESSELS

AS A PRELIMINARY TO A LUMBAR NEPHRECTOMY IN TUBERCULOSIS OR MALIGNANT GROWTHS OF THE KIDNEY.

GEORGE WALKER, M.D.
Associate in Surgery, Johns Hopkins University.
BALTIMORE.

A recent somewhat exhaustive study of tuberculosis of the kidney, the results of which have been published elsewhere, necessitated the examination of a large number of pathologic specimens, not only of renal tuberculosis but also of malignant tumors, in the Johns Hopkins Pathological Laboratory. From a careful analysis of over 400 cases of renal tuberculosis which I have collected from the literature and from personal observations on a number of instances of tuberculosis and malignant growth, I have been led to conclude that in the course of a lumbar nephrectomy for either of these two conditions, the operator is liable to squeeze tuberculous or malignant material into the general circulation and thereby cause an infection or metastasis. This conclusion is based on the following facts:

First.—Microscopic examination of numerous specimens of renal tuberculosis showed that the lymphatic vessels and the capillaries not infrequently end very near the tuberculous area. A certain number of these vessels are blocked by a proliferation of the endothelial cells, but in others the lumen is distinctly patent, so that it is possible in the course of certain manipulations that some of the tuberculous material may be squeezed into them, and thus gain entrance into the blood or lymph circulation. Closely similar physical conditions are seen in malignant growths.

Second.—In certain types of malignant tumors of the kidney the disease process extends well into the renal vein, sometimes forming a definite projection without having become an intimate part of the vessel wall. In all such cases it is very obvious that a small particle might very readily become detached and pass into the vein.

Third.—In two cases which came under my notice an acute, more or less general, tuberculosis followed the removal of the tuberculous kidney, and produced death within two months. In several instances belonging to my series of collected cases similar results were noted. Thus on one of my patients, who suffered from a renal and secondary bladder tuberculosis, a nephrectomy was done. A temperature of 102 degrees F. developed on the second day and the fever continued to the end. For the first ten days no focus could be found, but later trouble was discovered in the lower part of the right lung. This spread, the disease became general, and the patient died from miliary tuberculosis at the end of two and a half months.

Fourth.—In doing a lumbar nephrectomy, in order to free the kidney from its bed, it is necessary to press, squeeze and otherwise manipulate the organ rather roughly.

In view of the above facts, it has occurred to me that it is very possible, and indeed probable, that, during such manipulations as are required in the performance of nephrectomy, tuberculous material carrying tubercle bacilli in cases of renal tuberculosis or malignant material from a malignant growth can very readily be squeezed into the lymphatic or blood circulation, and thus give rise to a general infection.

In order to prevent such a possibility, I propose the following operation:

Do a laparotomy, push the intestines to one side, incise the posterior peritoneum, expose the renal vessels, put a double ligature around each of them, cut between and free the distal end for a short distance. In passing the ligatures it is well to include a certain amount of the immediately surrounding tissue, so as to pass around and ligate the lymph tract, which is not visible but which runs alongside of and very near to either the artery or vein. The peritoneum is then closed posteriorly and the anterior abdominal wound sutured in the usual manner. The patient is then turned on his side and the ordinary lumbar nephrectomy is done.

It may be asked why, when the abdomen is open, we should not remove the kidney through this wound. As a contraindication is the fact that with the very best operators the mortality for a transperitoneal nephrectomy is by 3 per cent. higher than for a lumbar nephrectomy.

It may be objected that this procedure produces two separate wounds and prolongs the time of operation. This is, to a certain extent, true, but it must be remembered that after the vessels have been ligated and cut, and to a certain extent freed, the time and manipulations necessary for a lumbar nephrectomy are reduced by fully one-half, so that the time spent in the preliminary ligation is offset by the lessening of the work required for the lumbar procedure.

The opening of the peritoneum under proper precautions should not in any sense add to the mortality of the operation.

The above procedure I simply propose for consideration. I have not done it, nor have I seen it done, but I suggest the method on theoretical grounds. The point which I wish to emphasize is that the usual method of doing a nephrectomy, in that it necessitates a squeezing of the kidney while the vessels are still open, is certainly dangerous in cases of tuberculosis or malignant growth.

Special Articles

MEDICAL AFFAIRS IN THE HEART OF THE ARCTICS.

N. SENN, M.D.
Professor of Surgery, The University of Chicago; Professor of Surgery and Head of the Surgical Department Rush Medical College.
CHICAGO.

(Concluded from page 1569.)

Epistaxis.—During the summer the Eskimos become so plethoric that Nature seeks to give relief by draining away the superfluous blood by hemorrhages from the nose. Epistaxis is a very common complaint in summer. I have frequently observed it, especially in young men who rowed my boat or accompanied me on my hunting trips inland. Any unusual exertion brought on the attacks. Men were more frequently subject to such attacks than women, and, although I could not get any definite information, I surmise that in women Nature relieves the abnormal congestion by increasing the menstrual flow.

Degeneration Diseases.—The Eskimos in the Arctic region are singularly free from the long list of degenerative diseases which cause so much suffering and cut short the lives of so many victims in civilized life. Commander Peary assured me that he had never seen a case

of dropsy or apoplexy among his numerous Eskimo acquaintances. The only Eskimo in whom I detected arterial degeneration was the syphilitic to whom I have referred before. I examined the radial pulse of several men who were at least 70 years old, and found it as soft and as regular as that of a healthy young adult. None of these showed even a trace of orcus senilis. Bright's disease, cirrhosis of the liver, diabetes, arteriosclerosis, coxitis senilis, cataract and other diseases resulting from visceral degeneration evidently do not occur in the Arctic region.

Ship Catarrh.—When the natives came on board the *Erik* and *Roosevelt*, with the exception of a few from the North Star Bay settlement who brought with them a slight nasal catarrh, they were free from catarrhal affection of the respiratory organs. In a day or two most of them were afflicted with a severe cough and a thin mucous discharge from the nose—in other words, an acute catarrhal affection of the nose and large bronchial tubes. This is a familiar disease to seamen who visit this region. The natives expect it when they board a vessel. The pure sterile air of the Arctic region does not contain the essential microbic cause of catarrhal inflammation. The ship brings the microbes and the coal-dust inhaled prepares the soil for their specific pathogenic action. This nasal and bronchial catarrh of the natives contracted so promptly on board ship is familiarly known as "ship catarrh." It lasts only a few days and does not appear to give rise to any considerable constitutional disturbance, as all those afflicted went about, ate their rations with a ravenous appetite, and the men lent valuable assistance in loading and unloading the cargo of both ships.

Epidemic Diseases.—Some ten years ago Commander Peary made a careful count of the Eskimos of that part of the west coast of Greenland north of the Danish colonies and settlements and fixed their number at 243. Since that time the population has diminished and at present does not exceed 150, and of these the women outnumber the men by far. Since that time the population has been decimated by two epidemics, Arctic dysentery and la grippe.

Arctic Dysentery.—During the years 1901-1902, 35 Eskimos were taken ill with fever and dysenteric discharges. During the beginning of the epidemic, which originated at Cape York, it was believed that the patients were made ill by ptomain poisoning, but the spread of the disease after change of diet soon furnished proof of the true nature of the disease. The disease pursued a very severe course and four of the Eskimos died. In the severest cases delirium was a prominent clinical feature. The tenesmus and bloody mucus pointed to the large intestine as the seat of the disease. The patients who survived became emaciated to a skeleton and did not recover their former strength for several months. It was ascertained later that the disease had its origin in Finland, traveled across Siberia, made its appearance at Cape Barrow, Alaska, finally cropped out in this remote part of the world and from here took its flight as far as Ungava Bay, an arm of Hudson Strait, where it proved very fatal to the Eskimos of that locality. The Greenland Eskimos abandoned the place when the disease had expended its force and that was the end of the epidemic. This disease traveled an enormous distance, from Finland to Ungava Bay, and crossed vast stretches of uninhabited territory, and from country to country between which there was no communication by human beings, and the only conclusion we can come to regarding its occurrence in so many isolated places in the Arctic region is that the parasitic cause was carried by animals, undoubtedly migratory birds. Most of the water fowl in the Arctics are infested with parasites, and the most common vermin, which the Eskimos carry in their clothing and relish as a delicacy eaten raw and squirming, is a large louse which selects for its host the most numerous of all Arctic birds—the little auk. There is every reason to believe that birds can become the carriers of pathogenic germs and can convey them from place to place, either in their feathers or in discharges from the intestinal canal.

La grippe, in its endless clinical forms, had its origin in the cradle of the North, and has since spread from there nearly over the entire surface of the inhabited parts of the world. It seems to have no respect for climate and nationality. This disease reached the Eskimos in the north of Greenland during the winter of 1896-1897. It attacked young and old alike, but proved more fatal in adults than in children. The southern settlements suffered more than the northern, but its spread from one settlement to another was very rapid. The bacillus of la grippe in this epidemic selected the nasal passages, the pharynx and large bronchial tubes as favorite seats for localization. The exact mortality is not known, but a number of the most useful men in the different settlements succumbed to it. From eye witnesses I ascertained that in nearly all cases nasal obstruction was one of the most distressing symptoms and that in blowing the nose something like membrane was expelled. Some believed that the epidemic was diphtheria, but the disease proved much less severe in the case of children than in adults and in none of them did it extend to the larynx. Aching pains in the back and limbs and great depression, mental and physical, were invariably complained of by patients old enough to express their feelings. The disease has not reappeared since.

Female Predominance.—The predominance of the female over the male population, the large number of children and young widows without mates remind us of another fruitful cause of the falling off of the Eskimo population—it is the risk to life of the walrus hunter. The male walrus, and the mother walrus as long as her child needs protection, are fighters. Commander Peary says that the walrus when in a fighting mood is a more dangerous enemy than the polar bear. Walrus hunting calls for skill and strength, and among the Eskimos this work falls to the lot of the younger men. The kayak, by means of which the hunting is done, is a very frail craft. The Eskimos can not swim, hence if the walrus, with its powerful tusks, tears a big hole in the sealskin of the kayak or careens the little craft, with few exceptions it comes out victorious from the fight, and the poor hunter drowns or is killed by the infuriated foe. Few years pass without one or more lives being lost in this manner. As all property is held in common, the loss of an able-bodied man to a settlement means a great calamity, as his widow, children and other relatives whom he may have to support all become a charge on the community.

A People Without a Physician.—Nearly all primitive races feel the needs of some one specially qualified to dress wounds, mend broken bones, and to whom they can apply for aid when disease throws the shadows of death over them. This sense of helplessness in case of accident or disease is inborn, as well as the desire for medical aid when needed. The Polynesians have their "Kahunas," the Indians their "medicine men," but the Eskimos, perhaps because so few accidents occur among

them and because their climate and manner of living exempt them from so many diseases which support physicians in civilized communities, have felt no such need of medical aid. They have neither physicians nor medicines. Here is a part of the world in which disease, when it occurs, is allowed to take its own course. Even Nature has ignored medicine in the Arctics. About the only vegetable product I could find here that could make any claim to the possession of medicinal virtues was the dwarf willow, from an inch to eight inches in length; not the erect willow of our copses, but reclining humbly on the scanty soil in a begging attitude, asking protection against the merciless cold of the long polar night. Nature pursues here a prophylactic course and fills the office of a hygienist and sanitarian rather than that of a physician or druggist. She shuts the door against disease-producing germs, and incorporates in the food on which the natives subsist iodin, the most powerful and least harmful of all known antiseptics. The Eskimos, like all other primitive people, are exceedingly superstitious, and when sick and threatened by death seek help and consolation from unseen sources. They believe in a good and a bad spirit. The former is the departed soul of a father, the latter a monster human being or animal. The latter they look for and sharpen their knives with intent to kill should he be apprehended. Sorcerers (angekoks) are summoned, who implore the good spirit by incantations and a mournful, unceasing, monotonous chant for help. The use of remedies internally or externally is not even thought of. The art of healing has no place in the heart of the Arctic region.

ESKIMO SURGERY.

Surgery among the Eskimos is verily a *lucus a non lucendo*. Fortunately, injuries and surgical affections very seldom afflict them.

Fractures.—The occupation of the Eskimos reduces the causes of fractures and dislocations to a minimum. In case of fracture, the injured limb is wrapped up at once in fur without making any attempt at setting the broken bone. The fur dressing affords some, if not complete, immobilization of the injured limb.

Wounds.—Wounds heal promptly without suppuration under the only dressing in use, the skin of an animal with the bare side directed toward the wound. All of the skins in use by the Eskimos emit a very disagreeable smell and yet they are surgically clean. Suturing of the wounds is unknown to them. At North Star Bay I examined a little girl who had recently been bitten by a dog. The right upper eyelid near the internal canthus of the eye was severed by a vertical tear. The wound was cicatrized with the eyelid almost completely everted. One or two stitches in this case would not only have shortened the time of repair but would have effectually prevented this permanent and annoying deformity. Several cases of gunshot wound that I examined had evidently, judging from the size and appearance of the resulting scars, healed by primary intention. In one case the bullet passed between the fibula and tibia in an antero-posterior direction, without fracturing either of the bones. The scars were small, smooth and movable, and the muscle function was perfect.

Frost-Bite.—Serious forst-bite, freezing of a limb deep enough to cause gangrene, is extremely rare among the Eskimos. Their winter clothing of bear and fox skins and fur or birdskin underclothing, with double fur boots, protects them against the severest cold. When the hands get cold the arms are withdrawn from the sleeves and crossed over the anterior surface of the chest under the coat, where they receive the benefit of the body warmth. The feet are kept warm by keeping the legs in constant motion. This restless condition of the legs becomes a habit to these people, which is kept up, although entirely unnecessary during the summer, particularly by the women. Whether sitting, standing or lying down, the women keep legs and feet busy.

In case of frost-bite the Eskimos proceed to rub the frozen part with snow and slowly thaw it out by body warmth. If it is the hand, the warmth of the chest underneath the fur coat will do it, if it is a foot, the body warmth of a willing sympathizing member of the family or neighbor is brought to bear on the congealed member. By this gradual process of restoring the suspended circulation, serious consequences are usually averted.

Amputation by an Eskimo Woman.—A few years ago the oldest inhabitant of the North Star Bay settlement was out on the ice hunting seal. On firing the old gun, the barrel exploded and a fragment of steel inflicted an ugly wound of the forehead over the right eye. The shock rendered him unconscious. He lay on the ice in this condition for a considerable length of time before he was discovered by one of his fellow hunters, who, with the assistance of others, conveyed him to his igloo, where he recovered consciousness. One of his feet was so badly frozen that gangrene of all the toes and a considerable part of the foot ensued. For weeks the dead toes dangled below the line of demarcation, but the tendons interfered with Nature's efforts to cast off the dead from the living tissues. The patience of the patient finally gave way and he implored his wife to amputate the toes. She consented, took a large knife and in one long sweep severed the dead toes from the granulating stump. The wound has never healed. The end of the stump is now covered with an adherent, thin, bluish scar of very low vitality but nearly the entire plantar surface of the foot is occupied by a chronic ulcer that will never heal. Since this mishap the patient has had to walk on knees and hands in going from place to place until the engineer of the *Erik* made for him a pair of rude crutches, with the aid of which he is now learning to walk erect again (Fig. 2). A gift was never more appreciated than was this one. We cleansed the filthy limb as far as the knee and disinfected the indolent, ill-looking ulcer and supplied the patient with dressing material which will last him a long time, and in the use of which his wife received adequate instruction. As the ulcer will never heal, an amputation is urgently indicated, as it is the only means which will give him permanent relief.

Tumors.—Extensive inquiry and a careful scrutiny of all the Eskimos that came under my personal notice confirm the statements made to me from different sources that there are no tumors of any kind to be found among the inhabitants of this part of the Arctic region. I could not even discover a wart or retention cyst of the appendages of the skin. Lipoma and fibroma, so common in the tropics, are looked for in vain here. Has the highly iodized food of these people anything to do in the prevention of tumors of all sorts, benign and malignant? It seems so to me.

Suppurative Infection.—The very fact that nearly all wounds and abrasions heal by primary union without either treatment or even effective mechanical protection is the strongest and most convincing proof that these people live in an atmosphere and on a soil free

from pyogenic bacteria. It is well known, on the other hand, that when the Eskimos come aboard a vessel and take part in loading or unloading cargo, the slightest scratch is liable to give rise to suppuration. It is related on reliable authority that during the Greeley expedition a member of his crew, while at Cape Sabine, suffered from a frost-bite of one of his legs resulting in gangrene which extended as far as the knee. The soft parts sloughed, leaving the bones exposed. He was never taken out of his sleeping bag saturated with his own excretions, and yet no suppuration occurred until, in this condition, he was brought to Godhavn. Here pus formed and he died in consequence of the pyogenic infection. Commander Peary remembers only one case of grave phlegmonous inflammation occurring in an Eskimo. It was in a man who accompanied him on his trip to the most northern part of Greenland in 1900. On the way the right hand and arm became enormously swollen and very painful, and he was so ill that he had to be sent back to Conger. For a long time the swelling and pain continued, when finally over the wrist-joint on the palmar surface of the forearm the swelling ruptured and a large quantity of pus escaped. Suppuration continued for a long time and a second perforation took place near the first one. Both eventually healed and the patient very slowly regained partial use of the hand. I examined this man at Etah. All of the fingers were contracted in a semi-flexed position. Two retracted scars over the wrist-joint marked the places where the deep-seated phlegmonous abscess (suppurative tendo-vaginitis) ruptured and where the scars have become permanently attached to the underlying tendons. Considering that this patient had no treatment of any kind, the functional result must be considered excellent. What dreadful suffering this man must have endured until Nature succeeded, under great difficulties, in eliminating the products of the deep-seated suppurative inflammation, can be better imagined than described. That the streptococci responsible for this fearful infection were imported requires no argument.

Erysipeloid.—Rosenbach's erysipeloid is an inflammation of the superficial lymphatic channels of the skin, which is seen with few exceptions only in persons engaged in the handling of fish and game, butchers, cooks, etc. Our cook on the *Erik* presented a good example of this etiologic and pathologic form of lymphangitis on the up-going trip. The sealers, of which the crew of the *Erik* was almost completely made up, informed me that a somewhat similar affection frequently occurs among the sealers when engaged in their business of killing and handling seal and is known among them as "seal finger." I expected to find erysipeloid among the Eskimos who live exclusively on game. All inquiries in this direction gave uniformly negative information and we must take it for granted that the germ of this disease, as well as the streptococcus of erysipelas, can not thrive in that climate.

ESKIMO MIDWIFERY.

We finally come to a part of the healing art of which the Eskimo knows something and in which he takes an active part—namely, midwifery. When a woman is in the throes of agony of labor, it is very natural that the bystanders, whoever they may be, take by suggestion instinctively, so to say, an active part in the parturient act. To lighten the curse imposed on woman for her indiscretion in the Garden of Eden is the natural dictation of a humane feeling which exists more or less in all classes of men. The Eskimo woman in labor is made the recipient of much attention and is given the willing assistance of one or more women who have learned from experience what it means to bring a new being into the world.

> "All is but lip-wisdom which wants experience."—Sydney.

Family life among the Eskimos of Greenland is an open affair. Privacy does not enter into the igloo and the tent. Within a space not larger than a good-sized family table everything is in common, including the table, which does not exist, and the common family bed, which consists of furs, the number of skins remotely indicating the size of the family. But when the Eskimo woman is about to give birth to a child, the husband, or whoever the prospective father may be, sees to it that the important act takes place in privacy. In summer he fixes a small tent for her exclusive use; in winter he builds a small ice igloo. She enters this private apartment with one or two women who have earned the title of motherhood, and on whom she places reliance during the coming ordeal. The parturient room is supplied with the necessary number of skins. When labor begins she is placed in a squatting position and one woman seated behind her with face toward her back passes her arms around her, clasps hands over her abdomen and when labor pains come on, makes firm compression. If a second woman is present, she takes firm hold of the patient's hands and does her good share of the grunting and straining simultaneously with the uterine contractions. A man gives official notice to the community of what is happening by going from tent to tent or igloo to igloo and with a stick or bone striking the roof with a rap that announces the news without making use of his tongue. When the child is born the officiating midwife takes a sharp stone and severs the cord near the umbilicus. As the cord is not tied, hemorrhage is prevented by dividing it with a dull instrument. The infant is wrapped in fur and is at once placed in the care of its mother. The only remaining function of the midwife consists in tamponing the vagina of the delivered woman, which is done with a bird skin. The woman then takes her child to the family igloo and resumes at once her usual household duties. Should the labor prove to be a protracted one, a small hole is made in the wall of the tent or ice hut, and through this opening food is thrown into the room for its inmates. The mother carries the child in the hood of the fur jacket on her back, next the skin, with its head on a level with or a little above the collar of its mother's fur coat. At night the infant takes its place in the common family bed. The Eskimo women nurse their children until they are two or more years old. When they are three months old they are given their share of blubber. Small pieces are placed in the mouth and they swallow them whole.

I saw many Eskimo infants and all of them were very pictures of health. Seven of them were on the *Roosevelt* when she sailed for the farthest North. Infantile mortality is very small notwithstanding the lack of care bestowed on the newborn. The fur clothing, the mother's body heat and the warmth of the joint family bed protects them against cold and instead of gorging their little stomachs with food prepared by the chemist they thrive on their mother's milk and the simple food Nature has provided for them. Neither children nor adults exhibit any indications of the existence of rachitis.

Judging from the robust appearance of the Eskimo

women, I have reason to believe that they are free from uterine and ovarian diseases and that gynecology would be useless in the Arctic regions.

ANIMAL DISEASES.

The only domestic animal the Eskimo knows and owns is the dog, or rather a mixture of dog and wolf. The dog is his beast of burden on which he must rely in traveling over ice and snow. The dog is to him vastly more than the horse is to us, it is—besides his own strength—his only motor power. Commander Peary took with him more than 200 of these beasts on this expedition, and if he succeeds in reaching the pole these faithful animals are entitled to their good share of credit. Nansen, Peary and other Arctic explorers have been seriously hampered in their work by a lack of dogs owing to the breaking out among them of a disease that nearly always proves fatal. The dog population all over Greenland suffers annually great losses from this disease. Neither Nansen nor Peary is satisfied that it is hydrophobia, although many facts and symptoms point that way. The governor of Godhavn, who has seen much of this disease, informed me that there are two distinct clinical types, acute and subacute. In the acute form the animal bites, froths at the mouth and dies within forty-eight hours; in the subacute type the dog sickens, is not vicious, does not froth at the mouth, the hind legs become paralyzed and the animal dies after an illness of about two weeks. If this disease is hydrophobia it is not the same as hydrophobia in other countries, because persons bitten by the sick animals do not contract the disease. Peary's own daughter was bitten by one of the sick dogs, but no ill results followed. The postmortems made on some of Peary's dogs revealed, as the only demonstrable pathologic condition, internal congestion of the mucous membrane of the small intestine, which induced Peary, acting on the supposition that the disease had its origin here, to administer a pint of castor oil to the next dog that sickened. This treatment proved curative, as the animal recovered. That dogs may contract the disease without being bitten by a diseased animal is a well-established fact, and the eliminative treatment would suggest itself the rational one. Loss of dog life from this cause is a source of constant anxiety to all Arctic explorers and of much concern to the natives, whose wealth is proportionate to the number of dogs they own.

Hares, rabbits and dogs are favorite hosts of the tapeworm, and the tapeworm, in turn, is the parasitic cause of echinococcus disease, which is so common in Iceland, Northern Europe and Australia. I took special pains to investigate whether or not tapeworm is present in the intestinal canal of the Eskimo dogs and the Arctic hare. I had more opportunities than I desired to examine the fecal discharges of more than 200 dogs for days on the decks of the *Erik* and *Roosevelt*. Not a trace of this parasite could be found. I killed many Arctic hares and examined their intestinal canals with the same negative result. It thus became clear to me why echinococcus cysts, so prevalent in Iceland, a neighboring island of Greenland, could not be found as one of the few diseases which afflict the Eskimo race. Pondering over this, as well as the numerous other prophylactic measures which Nature employs in protecting these simple, childlike people against disease, I became fully convinced that Providence rules here, like elsewhere, wisely and with forethought, the destinies of man.

IMMUNITY.

CHAPTER XXXII (Concluded).

INFLUENZA.

Influenza occurs sporadically and in epidemics of greater or less proportions. Its extreme contagiousness is shown by the striking rapidity with which it spread over the whole civilized world in the epidemic of 1889 and 1890, leaving behind it a trail of lesser epidemics which have prevailed up to the present time.

During the epidemic just cited a number of organisms were erroneously described as the cause of the disease. In 1892, however, Pfeiffer discovered a minute bacillus which he found constantly and in large numbers in the sputum of those suffering from influenza, whereas it was absent from other maladies. The observations of Pfeiffer have been confirmed by a large number of investigators, and the organism, *Bacillus influenzæ*, is now generally accepted as the cause of the disease. It is one of the smallest of bacteria (0.2 or 0.3 by 0.5 microns), is non-motile and forms no spores. A medium containing blood or hemoglobin is essential for its artificial cultivation, and even under the best conditions it grows somewhat meagerly and slowly. A number of bloods, but particularly those of man and the dove, favor its growth. It is a strong aërobe. The organism is best stained by a dilute solution of carbol fuchsin (1 to 10), and it shows a property called polar staining, i. e., the ends stain more deeply than the central portion.

Bacillus Influenzæ.

When the staphylococcus and some other organisms are grown in mixed culture with the influenza bacillus, the latter is stimulated to a more vigorous growth (symbiosis). According to Jacobsohn, killed cultures of the streptococcus greatly increase the virulence of the influenza bacillus when the mixture is injected into animals.

Symbiosis.

Pfeiffer designates as pseudo-influenza bacilli a number of influenza-like organisms which have been found in man and animals. They have the morphology of the influenza bacillus, are a little larger, and also prefer a medium which contains hemoglobin, but since some of them occur in animals which are known not to be susceptible to influenza, it is concluded that they can not be identical with the influenza bacillus. The influenza-like bacillus which Jochmann and Krause consider as the cause of whooping-cough, may be mentioned in this connection.

Pseudo-Influenza Bacilli.

The resistance of the bacillus to desiccation, sunlight and unfavorable temperatures is very low. It dies in from twenty-four to thirty-six hours at room temperature, when contained in sputum, and lives for about thirty-two hours in hydrant water (Pfeiffer). It is not highly virulent for experiment animals, although a condition said to resemble influenza has been produced in monkeys by placing pure cultures on the nasal mucous membrane. Fatal infections may be produced by intravenous inoculation of the bacillus into monkeys and rabbits, and killed cultures produce a fatal intoxication in rabbits. When virulent cultures are injected into the peritoneal cavity of guinea-pigs in sufficient quantity, the bacilli proliferate, and peritonitis ending fatally is produced. Since the bacilli seem not to proliferate when fatal quantities are injected intravenously into rabbits, and since fatal intoxication, without the occurrence of bacteriemia, may take place when a tracheal infection is induced in the ape (Pfeiffer), it is concluded that the toxic phenomena of influenza are due to the absorption of bacterial toxins from the mucous surfaces. A soluble toxin has not been obtained in culture media. The organism is a facultative pus producer.

Resistance and Virulence.

So far as is known the influenza bacillus is excreted only with the secretions of infected surfaces, i. e., from the upper respiratory passages, conjunctiva, ear, etc. The belief, commonly held, that the influenza bacillus does not enter the circulation is based on the fact that cultures have not been ob-

Distribution in the Body.

tained from the blood (Beck). That this may be an erroneous belief is suggested by a case of fatal influenza peritonitis reported by Hill and Fisch, in which the latter cultivated the organism in large quantities from the spleen. When the bacilli reach the blood it is probable that they are killed quickly. That metastatic infection is possible, however, either by way of the lymph or blood channels, is shown by the occurrence of influenza meningitis, and, rarely, of influenza peritonitis. It is probable that the ordinary nervous phenomena of the disease are due to intoxication rather than to actual infection of the nervous structures. As to whether the symptoms of so-called intestinal influenza are due to an invasion of the intestines by the bacilli or to a specialized action of circulating toxin seems not to have been definitely settled. There certainly is abundant opportunity for infection of the intestines in cases of bronchial influenza. In the bronchitis of influenza the organisms are found in large numbers in the smaller bronchial tubes, both free and within leucocytes; hence, in searching for the bacilli clinically it should be certain that the sputum examined represents the bronchial exudate. In influenza pneumonia, which usually is of the lobular type, the bacilli, mixed with pus cells and contained in them are found in large numbers in the alveoli. Pure cultures of the bacillus have been obtained from cases of conjunctivitis, and they occur not infrequently in middle ear complications which develop during the course of the disease. Influenza conjunctivitis sometimes occurs in epidemic form, particularly in institutions and schools.

Mixed Infections.

Pneumonic foci which develop during influenza frequently show the pneumococcus, and sometimes the streptococcus or the bacillus of Friedlander in addition to the influenza bacillus, and similar mixed infections occur in pleurisy and in middle-ear disease. Influenza may be superimposed on other infections; individuals suffering from pulmonary tuberculosis are particularly susceptible to influenza and in them the prognosis is unfavorable.

Transmission Infection Atria and Prophylaxis.

The disease is transmitted directly from man to man and, chiefly, it is supposed, by means of infected droplets of sputum which are expelled in coughing and sneezing. Obviously kissing affords opportunity for infection. Infection by indirect contact is of less importance because of the rapid death of the bacillus after it leaves the body, but living germs may well be disseminated by soiled handkerchiefs or other contaminated linen. Dust infection possibly is of minor consequence. Chronic influenza in which the bacilli may persist in the bronchi for weeks, and cause recurrent acute attacks, is of importance for the maintenance of an epidemic. Particularly in tuberculous cavities the bacilli may flourish for long periods.

Primary infection takes place in the upper respiratory passages, and the disease readily extends from one part to another as from the nose to the pulmonary tissue. Infection of the ear usually is a complication of pharyngeal or pulmonary infection. Occasionally an influenza conjunctivitis is found without other localization of the infection. "Primary" infection of other organs, as the brain and peritoneum, are metastatic, although the original focus or atrium may not be observed.

Little or nothing can be done in the way of general prophylaxis. Washing of the nose and mouth with antiseptics during an epidemic may reasonably be practiced, but with what success is uncertain. The aged and those of low vitality should avoid exposure to infection, for in them the severer complications, such as pneumonia, are more likely to occur. When influenza conjunctivitis appears epidemically in schools the latter should be closed or the infected children excluded.

Immunity, Susceptibility and Recurrences.

Although little or nothing is known concerning the possibility of a natural immunity in man, experience teaches that he is on the whole very susceptible. The belief expressed by some that nursing children are less susceptible than older people seems to have some foundation in experience, although it is well known that they are not entirely immune. Influenza is sometimes cited as an infection in which one attack creates a predisposition for a second, but the truth of this is doubted by many who have had extensive experience with the disease. Wutzdorff, in a study of the epidemic which prevailed in Germany during 1891-92, finds in the small number of cases, the irregularity of their distribution, and comparative exemption of rather large districts, reasons for believing that one attack confers a degree of acquired immunity; that is to say, the population had been so thoroughly infected (*durchgeseucht*) during the preceding year or two that comparatively few remained who were susceptible, although the disease itself appeared to be more malignant than in the previous year (cited from Beck). However, the occurrence of second attacks shortly after the first, and the occurrence of repeated infections in some individuals, are sufficiently well known, hence it seems fairly clear that immunity which may result from infection is of short duration. The aged, those of low vitality, and those with pulmonary tuberculosis, have low resistance to infection.

Serum Properties.

Although Delius and Kolle were able to produce a slight increase in the resistance of guinea-pigs by the intraperitoneal injection of cultures, nothing like a well-marked immunity was obtained; nor did the serum of immune animals or convalescent man show any increased protective power for other animals. Slatinćano, however, obtained serum of some protective power for guinea-pigs, by the immunization of rabbits and guinea-pigs, but it had no curative effect. The results of Cantani were similar, and both observers noted the development of bactericidal power, as determined by the Pfeiffer reaction, and of agglutinins. At the present time there seems little to hope from vaccination.

There is said to be some increase in agglutinins in man as a consequence of infection. The agglutinating power of the serum of an immunized animal may be as high as 1 to 500 (Cantani).

SOFT CHANCRE.

The independence of soft chancre from syphilis, and its infectiousness by inoculation with the purulent secretions of the ulcers, were established long ago. Rôllet found that filtered pus lost its infectiousness.

Bacillus of Ducrey.

A large number of observers had found bacteria of one kind or another in the pus and in stained sections of the walls of the ulcers, and probably some of them (e. g., Unna), had seen the bacillus which Ducrey described (1889) and later cultivated, and which is now proved to be the cause of the disease. The bacillus is very small (0.4x1.5 microns), is non-motile and shows polar staining. It resembles the plague bacillus in form, but is somewhat smaller, and does not show the extensive involution forms of the latter. In the ulcer it lies singly, in small groups, or more characteristically in the form of bands, made up of two or more parallel chains, which penetrate the wall of the ulcer. Large numbers are often found in the polymorphonuclear leucocytes of the pus, particularly in an early stage of the lesion (Kroefting). Great difficulty was encountered in cultivating the bacillus and Ducrey's first success was obtained with a medium which contained human skin. It has since been cultivated on agar which contains the blood or serum of man, rabbit or dog. Himmel attempted to cultivate it in the fresh defibrinated blood of the guinea-pig, but was unsuccessful because the bacilli were phagocytized by the leucocytes (Babes).

An ulcer resembling that of soft chancre may be produced in the ape, and also in the cat, by the inoculation of pure cultures. Didey reinoculated man from the ulcers of the cat. When living cultures are injected into the guinea-pig (peritoneal cavity, subcutaneous tissue, dura mater), the bacilli are quickly taken up by leucocytes and digested (Himmel). Himmel reports having so decreased the resistance of guinea-pigs by peritoneal injections of lactic acid that they became susceptible to infection. After two or three passages the culture became so virulent that fatal bacteriemia was caused without previously lowering the resistance of the animal.

In man the infection is transmitted to the inguinal lymph glands, but never becomes general.

CHAPTER XXXIII.

PNEUMOCOCCUS INFECTIONS.

PNEUMONIA.

Although there are several types of pneumonia or pulmonitis, no one organism is the exclusive cause of any one type, except perhaps the viruses of syphilis and tuberculosis, and any organism which can cause pneumonia can also set up inflammations in other organs.

Organisms Causing Pneumonia.

The following organisms are known to cause acute pulmonitis: *Diplococcus pneumoniæ*, *Streptococcus pyogenes*, *Staphylococcus pyogenes*, bacillus of Friedlander (*B. pneumoniæ*), *B. influenzæ*, *B. pestis*, *B. diphtheriæ*, *B. typhosus*, *B. coli communis*, and *Micrococcus catarrhalis*. The organisms of tuberculosis, actinomycosis, the virus of syphilis and of some other infections cause chronic inflammations of the lungs. Some of these organisms have already been considered and others will be briefly discussed later, in their relation to pneumonia, without, however, entering into details as to the various types of the disease.

The *Diplococcus pneumoniæ* is the commonest cause of lobar pneumonia, and not infrequently produces lobular pneumonia, and has been found as the only organism in acute interstitial pneumonia (Weichselbaum). Friedlander (1882) found that capsulated cocci were present constantly in the exudate of pneumonia. Such cocci in all probability represented the organism which at present is known as the diplococcus of pneumonia, yet the cultures which he obtained somewhat later showed the characteristics of the organism now known as the bacillus of Friedlander. Fraenkel in 1884 obtained the first named coccus in pure culture, and his investigations, together with those of Weichselbaum and many others, eventually established the independence of the two organisms, and showed that the pneumococcus is the most frequent cause of pneumonia, but that other organisms, including the bacillus of Friedländer, may occasionally produce the disease.

Diplococcus Pneumoniæ.

The typical pneumococcus is slightly elongated, and both in the tissues and in culture media it grows in pairs. Typically, also, the pair possesses a capsule which is present constantly in the tissues and may be obtained on certain culture media, as milk and serum. It is non-motile, non-flagellated, forms no spores and stains by Gram's method. Rather scant growth occurs on the ordinary culture media in the form of small colonies which resemble those of the streptococcus, and unless special media are used it usually can not be carried through many generations. When grown in sputum, or on a medium which contains the blood or serum of man or some other favorable animal, it may be preserved for many months in a fairly high state of virulence. By growth at 39° C. virulence is lost rapidly. Strains which are atypical in one of several ways are encountered not infrequently. Such strains may show a low virulence, may grow well at ordinary temperatures (the typical organism not doing so), may produce long chains in liquid media, or may grow without a capsule.

Typical and Non-Typical Strains.

Recently the danger of confusing the pneumococcus with the streptococcus has received renewed attention, and newer methods of differentiation render it extremely probable that such confusion has occurred in the past. An important differential method is that of growing these organisms on agar plates which contain blood (Schottmüller); the streptococcus produces a clear zone of hemolyzed corpuscles about its colonies, whereas the colonies of the pneumococcus present a greenish color and produce no hemolysis. In using this test Ruediger found a surprising number of pneumococci in normal throats, whereas previous work had shown them to be much less common than streptococci.

Confusion with Streptococcus.

In spite of the poor viability of the organism on ordinary culture media, it is fairly resistant to desiccation and sunlight, especially when imbedded in sputum. It is possible that the sputum forms a protective coating about the organism and that the well-formed capsule which it possesses as a parasite, increases its resistance. Like other bacteria, it resists diffuse sunlight better than direct, and in the former may live for as long as fifty-five days in a dried state (Bordoni-Uffreduzzi, cited by Weichselbaum). It has very little resistance to heat, being killed by a temperature of 52° C. for ten minutes. Virulence is lost rather quickly in ordinary culture media, but is retained longer when grown in sputum or media which contains serum or ascitic fluid.

Resistance.

No soluble toxin characteristic for the organism has been obtained, although more or less poisonous substances, some of them of a chemical nature have been described. Presumably the toxic properties depend on the presence of an endotoxin. The pneumotoxin of F. and G. Klemperer was prepared by precipitation with alcohol. The pneumococcus is a pyogenic organism and causes exudates which are rich in fibrin. Occasionally serous rather than purulent exudates are produced. Its toxic action is directed toward various organs, and it is doubtful if any of the tissues of the body are non-susceptible. Some strains are supposed to be more neurotoxic than others.

Toxic Properties.

The susceptibility of animals varies greatly. Rabbits and mice are extremely susceptible and are used as test animals for the identification of the organism. Other laboratory animals have greater resistance, and the pigeon and chicken are almost absolutely immune. In susceptible animals a rapidly fatal coccemia or more or less extensive local lesions are produced, depending on the virulence of the culture, the seat of inoculation and the susceptibility of the animal. In rabbits lobar pneumonia has been produced by inoculation into the pleura, trachea, blood stream or subcutaneous tissue.

Susceptibility of Animals.

The pneumococcus is present in the nose, mouth and pharynx of a large percentage of individuals. It is found frequently in the conjunctiva and occasionally in the deeper air passages. That it may reach the stomach and intestines with the sputum is apparent, and it has been found there as the cause of diphtheritic enteritis, a condition which may be followed by pneumococcus peritonitis or general infection.

Occurrence in the Body.

In the production of lobar pneumonia it is believed that the organisms are carried into the lungs by inhalation in most instances. Suspended in droplets of saliva or mucus, or adherent to foreign particles, they may be carried fairly deeply into the bronchial tubes. That they ever reach the alveoli by this means alone is questioned by many. Two factors would seem to prevent their being carried to the alveoli by currents of inspired air: First, foreign particles or infected droplets are likely to strike and adhere to the walls of the respiratory passages before they have traversed a great length, and from this situation may again be carried out by the action of the ciliated epithelium or coughing; the tortuous passages of the nose and its hairs and moist surfaces undoubtedly arrest many micro-organisms. Second, the velocity of the inspired air is greatly reduced or is nil by the time the particles might have reached the alveoli, a condition which renders their arrest all the more probable. Nevertheless, pneumococci do reach the alveoli, and by some it is supposed that even in health they are carried there more or less constantly and are as constantly destroyed. They have occasionally been found in the parenchymatous tissue of the lungs of individuals who have died of other than pneumococcal infections or of non-infectious diseases. In order to show that micro-organisms may be carried into the parenchyma by inspiration Nenninger allowed animals to inhale a spray containing *Micrococcus prodigiosus*, and killing the animals after one-half hour was able to cultivate the coccus from the base of the lungs where only alveoli and the finest bronchial branches were present (cited by Weichselbaum).

Entrance into the Lungs.

Various other agencies have been suggested by which the cocci may be carried to the parenchymatous tissue. For example, during the forced respiratory efforts which accompany coughing they may be carried from the bronchial branches into the alveoli. Or the organisms having reached the bronchi, in some way may be carried through the walls of the latter, perhaps by the leucocytes, and reach the alveoli directly through the lymph chan-

Lymphogenous and Hematogenous Infection.

nels or after having caused infection in the peribronchial lymph glands. Others express the opinion that pneumonia follows blood infection in many or most instances, i. e., that the infection is hematogenous, the cocci having reached the blood in some obscure manner. That the infection may be hematogenous is shown by the occasional occurrence of pneumonia secondary to pneumococcus infection in other parts of the body. These theories are sufficiently reasonable, but, unfortunately, little positive proof of their correctness is at hand.

Conditions for Infection.

Knowing the fairly constant presence of pneumococci in the upper respiratory passages in the normal individual, it seems certain that some unusual condition must arise to precipitate infection of the pulmonary tissue. Concerning the exact nature of these conditions or changes, we have at present little but theories. Manifestly they may rest either with the microbe or the individual, or with both. The pneumococci on the mucous surfaces for some unknown reason may undergo an increase in virulence preceding infection, or more virulent organisms from the outer world, or from pneumonic patients, may be inhaled. The latter condition is an important one in relation to the contagiousness of pneumonia and the development of epidemics. Park and Williams found a larger percentage of virulent organisms in the sputum of pneumonics than in that of normal persons. It is possible that the pneumococcus in being passed from one patient to another undergoes an increase in virulence, similar to the increase which may be obtained by passing bacteria through animals.

Decrease of Resistance.

On the other hand, it is very probable that essential changes take place in the individual, changes which in some may cause the lowered resistance which is so often referred to as a condition for infection. Exposure to cold has long been known as an important predisposing factor, although we continue in ignorance of its precise effects. Experimentally it has been shown that animals are more susceptible to pneumococcus infection after artificial reduction of the body temperature. It is possible that a lowered body temperature may decrease antibacterial activities; that the activity of the bactericidal ferments of the plasma or of the leucocytes may be suppressed, or phagocytosis may be inhibited so that organisms which reach the bronchi and peribronchial lymphatic structures are allowed to proliferate. It is probable that in health the leucocytes continuously pass through the bronchial and alveolar walls where they may englobe foreign particles (coal dust) or bacteria and leucocytes are present on the mucous membranes of the mouth cavity. Following exposure and the reduction of the body temperature, or following the prolonged inspiration of cold air, the activity of the phagocytes may be inhibited so that cocci which reach these surfaces are not ingested and continue to proliferate, or the same conditions may decrease the exudation of the leucocytes from the vessels. It is possible also that the activity of the ciliated epithelium is reduced similarly so that the cocci are not so readily carried to the exterior.

Other Predisposing Factors.

Extreme exposure is not always followed by pneumonia, however, and not all cases of pneumonia are preceded by exposure; many other conditions may predispose to infection, as a lowered resistance due to alcoholism, other infections or to non-infectious processes. That certain local conditions may favor infection is indicated by the frequency with which individuals with chronic tuberculosis of the lungs die of pneumococcus pneumonia, and the development of the disease in areas of hypostatic congestion. Age is of influence. "To the sixth year the predisposition to pneumonia is marked; it diminishes to the fifteenth year, but then for each subsequent decade it increases" (Osler). The cause of these variations is not known, although the rise in later years may be associated with increased exposure.

The conditions which predispose to infection are now the subject of active study in many laboratories, and the commission which the New York Department of Health has established for the study of acute respiratory diseases has already made important observations as to the prevalence and virulence of pneumococci.

Complications.

Many observers have found pneumococci in the blood in a large percentage of the cases, and recent work by Rosenow indicates that the blood is probably infected in all cases at some stage of the disease. This being the case, the frequency with which pneumococcus infections occur in other organs as complications of the disease is readily understood. Pleuritis is present almost constantly, pericarditis frequently, and the peritoneal cavity is invaded not infrequently by way of the diaphragm, with general peritonitis as the occasional result. Endocarditis, meningitis and arthritis are frequent complications. Conjunctivitis, otitis media, cutaneous or subcutaneous infections, intramuscular abscesses and osteomyelitis may develop, and the kidneys and liver usually show acute degenerations.

Diplococcus pneumonia occurs as a complication in typhoid, diphtheria, tuberculosis, influenza, erysipelas and other infections, the organism of the primary infection also being found in the lungs. Not infrequently staphylococci or streptococci, or the bacillus of Friedlander, are found together with the pneumococcus, the latter being the predominating organism.

Prophylaxis.

Prophylactic measures are largely of an individual character and in the main they are suggested by what has been said. One should not come in contact unnecessarily with those suffering from pneumonia. The susceptible should be guarded against exposure; in hospitals pneumonia should be considered as a contagious disease, the cases isolated as such, and the sputum disinfected; expectoration in public places should be limited. To what extent the dust-laden atmosphere which prevails in most of our large cities is a factor in causing pneumonia is unknown. Vaccination is not yet an established procedure.

Immunity and Susceptibility.

It is probable that the susceptibility of man varies greatly. Under equal conditions of exposure not all contract pneumonia and an individual who eventually contracts the disease may have undergone many similar exposures previously. Klemperer introduced a culture of the pneumococcus which was virulent for rabbits under his skin without suffering more than temporary disturbance.

Recovery.

Recovery seems to indicate an acquired immunity or resistance which is by no means permanent, and often is of very short duration. One may have as many as eight or ten attacks of pneumonia, the intervals between attacks being from three to five years on the average (Griswolle). What the recovery or acquired resistance depends on is unknown. The marked leucocytosis of pneumonia, and the known phagocytic power of the leucocytes for the diplococcus, suggest strongly the importance of the leucocytes for recovery. The serums of convalescents and of immune animals show no increased bactericidal power for the organism, nor are they strikingly antitoxic.

Serum Properties and Opsonins.

Beginning with Fraenkel (1886), many have shown the possibility of increasing the resistance of susceptible animals to the pneumococcus by injecting first dead or avirulent and then virulent cultures; in this way the subjects can be made to withstand many multiples of the minimum fatal dose. Culture filtrates and precipitates (the pneumotoxin of F. and G. Klemperer) have been used for similar purposes. The serum of immune animals, and in some instances of convalescents, has been found to have a protective effect when injected into other animals, and by some a curative effect is claimed when the serum is given shortly after infection. Mennes made the interesting observation that "normal leucocytes only become phagocytic toward pneumococci when they are lying in the serum of an animal immunized against this bacterium" (Muir and Ritchie). This action may have been due to the effect of the opsonins which Wright and Douglass have shown to be essential for phagocytosis of the pneumococci. According to Neufeld and Rimpau, antipneumococcus serum is not bactericidal, but through the influence of bacteriotropic substances (opsonins ?) which it contains renders the cocci more susceptible to phagocytosis.[1] Likewise, Park

1. This bacteriotropic substance, according to Neufeld, differs from the opsonin of Wright in that it is not destroyed by low degrees of heat.

and Williams found antipneumococcus serum from the sheep to be protective for mice and to stimulate phagocytosis. The correspondence between bacteriotropic action and protective power was variable, however, so that it did not appear certain that the protective power of the serum was due entirely to its influence on phagocytosis. We are, of course, not sure that events in the animal body correspond with those in the test glass.

Serum Therapy and Agglutination.

Some of the serums which have been prepared have been used therapeutically in man. The results have not been sufficiently satisfactory to put them on a good basis, although some favorable reports have been given. The serum of pneumonic patients shows an increased agglutinating power for the pneumococcus. The maximum is reached at or near the time of crisis, but rarely has a higher value than 1 to 50 to 1 to 60 (Neufeld, Rosenow). It disappears quickly after recovery. In immunized animals the agglutinating power may be pushed to much higher limits. Not all strains yield agglutinins equally, and not all are agglutinated equally by the same serum. According to Collins, pneumococci fall into different groups, depending on their agglutinating properties; the same author determined the presence of group agglutinins in an immune serum. Neufeld states that avirulent strains were not agglutinated by the serum of pneumonic patients.

OTHER INFECTIONS BY THE PNEUMOCOCCUS.

Complicating infections by the pneumococcus during the course of pneumonia were mentioned above. They may occur by way of the lymph channels, as in pleuritis, pericarditis and peritonitis (through the diaphragm), by contiguous extension, as in infection of the bronchi, nose and, perhaps, the middle ear, or as metastatic infections following the invasion of the blood stream by the organisms. It is undoubtedly in the last named manner that meningitis, endocarditis, arthritis, muscular and subcutaneous abscesses arise.

Mode of Infection.

Other infections by the pneumococcus occur independent of the existence of pneumonia. Such conditions are alveolar abscesses, conjunctivitis, dachryocystitis, serpent ulcer of the cornea, inflammation of the middle ear, meningitis, enteritis, rarely peritonitis, and pneumococcus septicemia which may be complicated by infection in various organs. The eye is exposed to infection from without and the ear from the pharynx. The meninges may be infected by way of the middle ear or the nose, or the organisms may gain entrance through the circulation from a primary focus in another organ, perhaps an undiscovered focus. Infection of the peritoneum may follow an intestinal infection; a pure pneumococcus infection of the peritoneum in the absence of pneumonia is extremely rare. Pneumococcus infections of the eye, ear, intestines and peritoneum are likely to be accompanied by other organisms.

Pneumococcus conjunctivitis occurs in epidemic form and the same precautions should be taken to limit it as for the limitation of influenza conjunctivitis.

Serpent ulcer of the eye, a progressive phagedenic process in the cornea, has the pneumococcus as its essential cause, although other organisms may be present. Roemer treats the condition with an antipneumococcus serum and claims that he is able to arrest the process if the treatment is begun sufficiently early. The serum is injected beneath the conjunctiva.

Clinical Reports

A CASE OF ACCIDENTAL ESERIN (PHYSOSTIGMIN) POISONING WITH RECOVERY.

B. F. STEVENS, M.D.
EL PASO, TEXAS.

Patient.—A woman, aged 28, because of a mistake in telephoning a prescription, received a dose of two grains of eserin sulphate hypodermically, instead of a fiftieth of a grain as was intended.

History.—I had operated on this patient four hours previously for a double pyosalpinx, and gave the eserin to aid in passing flatus. An hour before receiving the eserin she had been given morphin, ⅙ grain, with atropin, 1/200 grain, for pain. Within two or three minutes after receiving the eserin, she turned purple and her bowels moved profusely and involuntarily. Respirations became shallow, the trachea, pharynx and larynx filled with mucus, and the pulse became imperceptible, even over the carotids. She remained unconscious for about twelve hours.

Treatment.—The following drugs were given hypodermically in divided doses: Atropin, 1/10 grain; nitroglycerin, 1/30 grain; strychnia, 1/10 grain; brandy, a dram, and aromatic sulphuric acid, a dram; 1,200 c.c. of normal salt solution was also given subcutaneously around the breasts. She was surrounded with hot water bottles and given plenty of fresh air, the tongue being drawn forward with ordinary vulcellum forceps. She was catheterized every half-hour.

Recovery was probably due to the fact that she had received a small dose of atropin and morphin a short time before the eserin was given. Potter says that immense doses of eserin may be given without harmful effect if preceded by even minute doses of atropin, which is the physiologic antidote. The salt solution, no doubt, was of great benefit, because eserin is eliminated almost entirely through the urine. A mild enteritis followed, but this persisted for only a short time.

OBSTRUCTIVE JAUNDICE CAUSED BY A ROUND WORM IN THE COMMON BILE DUCT.

J. G. HILLEARY, M.D.
DUBOIS, PA.

The patient was a bright, well-developed boy, aged 10, who had never been confined to bed on account of sickness in his life. I was asked to see him on the eighth day of his illness. Besides being intensely jaundiced, his trunk and limbs were covered with large patches of urticaria, which caused him great annoyance from the burning and itching. Nausea and vomiting, with loss of appetite were present throughout the attack. The tongue was coated and the mouth dry. Bowels were constipated; stools clay colored, pasty and fetid. Temperature was normal; pulse 60. The lungs and heart were normal; the abdomen was normal except for pain and tenderness over the region of the gall bladder.

Having lately read an abstract of an article in the October number of the American Journal of the Medical Sciences, by W. Epstein, on the diagnostic significance of strangulation marks on round worms, and with the cause of the obstructive jaundice in this child not clear, coupled with a history of the passage of two round worms a few months previously, I made a probable diagnosis of a round worm in the common duct. Calomel and santonin were given, and in ten hours the worm was passed with complete relief of the symptoms. The worm showed a distinct strangulation mark two inches below the head.

As such markings are never found normally, I think it is safe to say the worm was the cause of all the trouble in this case.

SAFETY PIN SAFELY PASSED BY A CHILD OF ELEVEN MONTHS.

L. W. LITTIG, M.D.
IOWA CITY.

On October 19, Dr. W. D. Phillips, Victor, Iowa, consulted me regarding an 11-months-old baby who had accidentally swallowed an open safety pin, one and one-eighth inches in length. I was inclined to locate the pin with the *x*-ray and to at once remove, if seen in the stomach, but it was decided to wait for trouble and then to operate without delay. On October 24, a few hours less than five days after the pin had been swallowed, it was passed by the child. No inconvenience at all was suffered and no special treatment was given. The parents lived in the country, and did not bring the child for *x*-ray examination; hence, there was no opportunity to observe the progress of the pin through the intestine.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, NOVEMBER 25, 1905.

THE DIAGNOSIS AND PROGNOSIS OF PARALYSIS AGITANS.

The art of diagnosis requires a knowledge not only of the main types of a given disease, but also of its atypical forms, the so-called *formes frustes* of French writers. In some diseases easy of recognition in their typical form, atypical forms are common and difficult of recognition, and of no disease is this more true than of paralysis agitans. According to Erb's observations, paralysis agitans presents itself in an atypical form in about 20 per cent. of all cases, and Oppenheim believes that this estimate is too low rather than too high. Under such circumstances, a knowledge of the atypical forms of this disease is a necessity, as the condition is not uncommon.

Oppenheim[1] has recently expressed his views regarding this disease in a masterly paper in which he pays especial attention to the diagnosis of masked cases. Paralysis agitans without tremor, first described by Charcot in 1875, is stated to be quite common. In some instances the tremor is latent, and may be elicited by active movements, or by plunging the limb into cold water. In connection with tremor Oppenheim describes a procedure which produces what he calls false ankle clonus. The foot is strongly flexed dorsally and held in this position for some time; on release a rhythmical tremor may result, and is quite characteristic of paralysis agitans. In typical cases without tremor the diagnosis usually may be made on the general attitude of the patient, the muscular stiffness and the propulsion and retropulsion. The cases most difficult of diagnosis are those in which the disease is just beginning, and in which only one side or one limb is involved. Oppenheim states as a general proposition that a slowly developing stiffness and unwieldiness in the limbs of one side occurring in an old individual is generally paralysis agitans. The slowing of the movements in these cases and the stiffness usually begin first at the distal parts of the extremities, so that special attention must be devoted to the finger and toe signs if early diagnosis is to be made. In the fingers difficulty in flexing or extending the fingers one after another may be noted early, or abduction and adduction may be difficult. Changes in the toes are more difficult to detect, as the normal mobility of these structures varies a great deal. In unilateral cases, however, Frank has described a valuable diagnostic sign. This consists in the fact that any attempt to move the toes on the affected side results in movements in the toes of the non-affected side; the reverse is not the case. In some cases changes in the handwriting are of value in connection with other tests. Oppenheim lays stress on the tendency of these patients to write slowly and to construct much smaller letters than they formerly did.

Various early or premonitory signs are mentioned which may render diagnosis easier in doubtful cases. Rheumatoid pains, gastric disturbances, salivation and hyperidrosis are mentioned as not infrequently preceding paralysis agitans or accompanying the early stages. Bladder and rectal disturbances are rarely seen. Besides the ordinary difficulty of gait, the trouble in starting and stopping, an exaggeration of the former is occasionally seen. In some instances, the patient seems totally unable for some time to start walking, even when he desires to pass merely from one room to another. He stands as if rooted to the spot, and appears quite helpless. Oppenheim thinks that in these instances there is a strong psychic element at work.

So far as the prognosis of this disease is concerned, Oppenheim takes a much more optimistic view than formerly. He still states that he has never seen cure result in this condition, but he also states that under proper conditions he has seen the progress of the disease apparently delayed for a considerable period of time, and he has seen severe cases transformed into mild ones. The prognosis, of course, is most favorable in those cases in which the condition is recognized early, and the recognition of the atypical forms is necessary for this.

1. Deutsche Med. Woch., 1905, vol. xxxi, p. 1705.

FOOTBALL AND ITS DANGERS.

Football is not as bad as the Fourth of July. In the first place it costs only ten to fifteen per cent. as many lives and fewer eyes; furthermore, the fun lasts three months instead of two or three days, so we get more per boy. Yet in spite of this evident innocuity, the popular protest against the game, as played at present, seems to be stronger and more general than ever before. Not that the game is waning in popularity, for as usual the attendance at the big championship games is limited to the number of people the grounds will hold, plus as many more as can get in. We hear a great deal about lessening the danger of football by making the game more open, and substituting end runs, trick plays and punting, for the steady hammering down the field a yard or two at a time, with a unanimous pile-up at each down. Interesting as the open game is to the spectator, the idea that the only real football is the line-bucking, bone-breaking game seems to have a firm hold. This was well illustrated by a recent championship game between two of the great universities of the Middle West. One coach had developed the open game to an unusual extent, not with any idea of "elevating the

stage," but simply because his team was best adapted to that style of game. The team met another which limited its efforts to steady line plunging, and the open game won. The ball was on the opponent's side of the field the majority of the time, the line-plunging team made fewer yards than were made by the open game of the winner, and the team playing the open game did not have to take out a man for injuries during the entire game; and yet, almost unanimously the press and the public insisted that the defeated team played the better game, simply because it had gained more ground by line bucks than had its conqueror. The public verdict seems to be that five yards made by line bucking is worth more than ten yards made through open plays. While the public attitude is such it seems improbable that any reformation in football is near at hand.

From the standpoint of the educator, one of the greatest dangers of football is the degree to which it absorbs the student's interest. For the first two months of every school year the entire mass of students is concerned chiefly with the football prospects of the college team. As for the athlete himself—even if he is a *bona fide* student and not simply hired for his football ability—he is being crammed full of signals, new plays and "dope" of all varieties until there is little time or cephalic capacity left for anything else. In those colleges where a fair class-room standing is required by an unappreciative faculty, the football manager finds it necessary to provide tutors for his team in order to keep them on the eligible list. The whole student body is in such a state of excitement over football, to which the daily papers add in every possible way, that the many other interests that go to make up a normal college life are neglected hopelessly in the very beginning of the year's course.

Little good can be claimed for football on the grounds of physical training, either. The men on the teams are the very ones whom Nature has endowed superabundantly with physical capacity, but on them the physical director bends most of his energies, while the average student is left to get his physical development by yelling from the bleachers. The Rugby game, as Americanized, can never be a popular game in which all the members of a school can participate. To withstand the violence of hard tackling, and the crush of line plays, one must be in the best of training, and after a hard game the novice, if he lasts through, finds himself sore and weary for many days.

What is needed is a game that can be played by the majority of the students, without going through a prolonged course of training and preparation, and which is suitable for the coolness of the autumn and early winter days. Lacrosse has often been suggested as a substitute for football, and as a game that is both interesting to the spectator and full of good wholesome exercise it can not be surpassed. It might well form a part of our college sports and in a few colleges it does so, but there seems to be one obstacle to its general adoption—it requires a high degree of dexterity on the part of the player not soon acquired by a man not trained in athletics. Like baseball, it requires for satisfactory playing that it be taken up early in life and followed continuously, but still a certain degree of success and much pleasure may be obtained by the average student taking up the game for the first time after entering college.

There seems a much better prospect for the Association football game, and we welcome the effort that is now being made in several colleges to introduce it into their lists of sports. The use of the hands being eliminated, there are none of the dangers of tackling, and there are no mass plays. The ball is in sight always and in constant motion, features that appeal to the onlooker. Being a game that the most awkward novice can play after a fashion, and that still permits of high development of skill and of team play, it should offer opportunities to all classes of students. Such a game should be played within the circle of the individual college, between classes, departments, fraternities, dormitories and the other innumerable divisions of the student body. Without the strife incident to intercollegiate athletics there would be no more heard of professional coaches at large salaries, of professional players and other unacademic accusations. The game would then do far more for the physical welfare of the students as a whole, and there would be much less bitter feeling between sister institutions.

NEW YORK HEALTH BOARD FROM A GERMAN VIEWPOINT.

We have grown so accustomed to criticism from at home and abroad on our municipal government, we have come so to expect unfavorable comparisons between ourselves and other countries in this respect that we experience a shock of pleasurable surprise when we hear that a municipal department in one of our great cities is held up to general admiration. Still more gratifying is it to hear that the praise comes from Germany, from Berlin itself.

At a meeting of the Berliner Medizinische Gesellschaft,[1] Professor Wassermann, in a paper on "Municipal Hygiene," spoke of the Department of Health of Greater New York as a model to German cities, especially in the direction of public control of infectious diseases. Professor Wassermann pointed out the undeniable fact that the general practitioner has neither time nor authority sufficient to enable him to control the infectious diseases especially among poor, ignorant people. It is this function which the Department of Health of Greater New York has assumed without thereby encroaching on the rights of the physician. The two diseases which Wassermann chose to illustrate New York's methods are diphtheria and tuberculosis, and incidentally his comments throw light on the methods in use in German cities, which, apparently, are far behind New York and a few other cities in such matters. Although

1. Cbl. f. Bakt., Ref. Aug. 28, 1905, p. 45.

in many respects the methods in use in New York are common to our large cities, yet in completeness of detail they are unequalled, so far as we are aware, anywhere, and it may be worth while to outline them here, lest it should be said that foreigners do us more justice than we do ourselves.

Professor Wassermann describes, as he sees it, what occurs in New York when a physician visits an indigent case of tuberculosis. The first physician fills out a card which is sent to the Department of Health, stating the hygienic and social surroundings of the patient, and answering "yes" to the printed question whether or not he desires an inspector to visit the patient. The inspector—a physician employed exclusively in the control of tuberculosis—visits the patient, decides whether he may be left at home or must be sent to a hospital. In the former case, if he thinks necessary, he places him under the supervision of one of the department nurses for the tuberculous poor, who sees his directions as to care and precautions against infection are carried out. Meanwhile, elaborate statistics are in course of compilation, so that the department is gaining "an extraordinarily clear picture of the distribution of tuberculosis in the city, the existing sources of infection," etc. If a tuberculous patient dies at home, a placard is fixed on the door of the apartment stating in different languages (including Hebrew and Chinese) that tuberculosis is a communicable disease, and that the apartment must not be thrown open until it has been thoroughly disinfected.

The free examination of throat cultures for physicians, and the administration of antitoxin free to poor patients is so common a function of municipal health departments for us that we are surprised to find Professor Wassermann speaking of it as something extraordinary. In this respect New York does not differ from other cities, but we doubt whether many can boast of so careful and complete a system of supervision of diphtheria and other infectious diseases. As soon as a positive bacteriologic diagnosis of diphtheria has been made, the department notifies the principal of the school attended by the child. A list of quarantined patients, with their addresses, is furnished daily to schools, institutions, settlements, etc., together with the names and addresses of those just released from quarantine. A sanitary inspector, and if necessary, a department nurse, visits each quarantined case to make sure that the proper precautions are being observed. Disinfection is not performed nor the quarantined removed until two bacteriologic examinations of the throats of the patients and other members of the family have given negative results.

Professor Wassermann emphasizes New York's enormous task in combating disease among the thousands of ignorant immigrants from all parts of the world yearly landed in her midst. It is certainly a matter of pride that in the face of these difficulties she has shown herself able to perfect a system superior to that of cities which have not such enormous problems to solve.

TRANSPLANTATION OF ORGANS.

An interesting illustration of the application of clever surgical work to experimental physiology and pathology is the recent work of Carrel and Guthrie[1] of the University of Chicago. They have successfully removed a kidney from a dog and transplanted it into the neck of the same animal, uniting the renal artery with the carotid artery, the renal vein with the jugular, and the ureter with the esophagus. The circulation was not impeded by the formation of thrombi, and was completely re-established in a short time. In this new location the transplanted kidney secreted urine about five times as fast as the normal one. The constituents of the urine were the same, but in composition the chlorids were increased, while the organic sulphates, pigments and urea of the normal kidney were greater. The transplanted kidney examined some days following the operation was larger and darker in color than normally and the circulation distinctly increased. They claim this as the first successful transplantation of kidney on record.

They also successfully reversed the circulation in the thyroid gland of a dog by removing the gland and then replanting it, suturing the blood vessels in such a way that the blood entered the organ through the vein and left it through the artery. Forty-seven days later the replanted gland was normal, the only change being a slight increase in size.

This work is suggestive, not only from the standpoint of physiology, but particularly from that of therapeutics. It is in close relation to the work done by Cristiani[2] on transplantation of thyroids from one animal to another of the same species, and also to that of a different species. He showed that successful thyroid transplantation could be done with ease in animals of the same variety, but his results were not so good when transplantations were made from one animal to another of a different group, this depending on their relation in the animal scale. For instance, a graft from one class or family of animals to another always fails; from one order to another, as from dog to cat, usually fails; while from one variety to another, as between varieties of birds or of dogs, the result is usually successful. He did not unite the vessels, as do Carrel and Guthrie, and it is possible that with this improved technic the results may be much more successful.

Cristiani has promised experiments on transplantation of human thyroids into monkeys. This work is of great significance, because of the possibility of furnishing a permanent remedy for disease dependent on the loss of thyroid secretion, such as myxedema. This idea may be applied to other diseases also; thus in human diabetes one may consider the possibility of transplanting a portion of the pancreas from the anthropoid apes

1. Science, Oct. 13, 1905, "Functions of a Transplanted Kidney"; also Oct. 27, "Extirpation and Replantation of the Thyroid Gland with Reversal of the Circulation." See also the article by Carrel in this issue.

2. Journal de Phys. et Path. Gén., vol. iii, p. 200, also vol. vi, p. 476.

to the diabetic. It may even be possible at times to obtain human organs for this purpose, as in case of persons killed accidentally or dying suddenly from some other cause. The same question arises in connection with diseases of the suprarenal, though it appears that so far all attempts to transplant this organ have failed. Then there is the suggestion that eventually it may become possible to replace a permanently diseased kidney with a normal one. While many of these therapeutic possibilities are as yet more or less remote, the operative results obtained by Carrel and Guthrie show that a new way has been opened for the experimental study of many problems in glandular physiology.

THE JOURNAL OF BIOLOGICAL CHEMISTRY.

The development of medicine is along lines that were hardly dreamed of a quarter of a century ago; and not the least important of these is that which is known as biologic chemistry. Until now there has been no journal in the English language devoted to the subject. Under the circumstances, therefore—and this in spite of the fact that we have in this country ten times more medical journals than can be legitimately supported—we welcome a new one that has just appeared—the *Journal of Biological Chemistry*. It will be devoted to recording progress made in the biologic sciences, chemical in nature, and consequently that particular branch of science that now seems to promise so much for medicine. The editors are J. J. Abel of Baltimore and C. A. Herter of New York, and they will be assisted by an exceptional corps of collaborators. The *Journal of Biological Chemistry* should receive the encouragement of every physician who is interested in that branch of medicine.

PHYSICIANS' RESPONSIBILITY IN THE CRUSADE AGAINST PATENT MEDICINES.

As its share in the present concerted efforts to curb the nostrum evil, the main task of the medical profession of course must be to eliminate the objectionable features of the "ethical proprietary" trade. But it must also recognize its responsibility in the fight against the patent-medicine abuse. The lay publications that are exposing so thoroughly all the evils of the nostrum traffic can be depended on to continue their crusade, but they also must have medical support, if genuine reform is to be ensured. Further, in order to enjoy the benefit of a really free press or to secure pure food and drug laws, the newspapers must be constrained by public opinion to repudiate nostrum advertisements containing the enthralling "red clause." To this the medical societies should give immediate attention, as the time is at hand when advertising arrangements are made for the ensuing year. Resolutions do some good, and especially do they encourage the brave lay journals that are taking the lead in this reform. *Collier's Weekly* published November 18 a list of nine medical societies that have endorsed its efforts, and urged the societies to unite in some plan of action. The most effective method of persuading publishers to refuse contracts that throttle free speech is the appointment by local medical societies of committees to visit the publishers. The personnel of these committees should be adjusted to the object of bringing to bear the greatest possible pressure by persons of amiable dispositions, intimate acquaintance, respected standing and enlightened minds. These committees, armed with facts and knowledge of conditions as only medical men can be, will, if tactful, be almost irresistible, and should play a foremost part in abating a grave peril. Certainly the patent-medicine manufacturers will cry that we are interested from selfish motives, but this should not deter our action in the least degree. In the main, the public will discount that drowning plea of all monsters. At any rate, we should do our plain duty, being confident that such conduct will not long be misjudged. Only the other day a very prominent newspaper owner asked why physicians do not take the lead in informing the public of the real dangers of the patent-medicine traffic. He asked who were to inform the public and editors of newspapers of the physical harmfulness of the indiscriminate use of patent medicines if not physicians. It seems, then, that we are expected to act, and that other forces of reform are depending on us. This was emphasized by Mr. Bok's letter, which we published some months ago. In addition to the passage of resolutions and the appointment of committees, our societies should aid in the wide distribution of the literature of the crusade, and should present the real reasons why patent medicines should not be used.

THE SUPERVISION OF HOSPITALS.

Following the lead of certain foreign critics who some little time since charged financial extravagance in the construction and the management of quasi-public hospitals in New York City, action has been urged recently to bring about some needed reforms. It would appear that the self-perpetuating lay boards of control of some of these hospitals are largely responsible for the evils of which complaint was made, and it is a natural consequence of excessive expense in building and management that such institutions must be seriously curtailed in usefulness to the general public. As adjuncts to charity they must necessarily be a failure to a very great extent. While we are apt to be suspicious of public control of such institutions in our large municipalities, a certain amount of it might be an excellent thing and would be only a reasonable offset to the exemption from taxation which such institutions enjoy. It is a rather striking coincidence that while the City and County Hospital at St. Paul was being held up—at a New York meeting of physicians—as a model of comparative excellence in the particulars in which the New York hospitals were open to criticism, the mayor of the twin city, Minneapolis, had just been calling attention to another hospital evil that is not peculiar to any one municipality. That is, the existence of private hospitals, conducted for gain or advertisement and uncontrolled by any special higher authority. It would appear from his remarks that special evils or scandals have brought such into prominent notice within a recent period in his city. That this is not a common occurrence is due to

the fact that so many of these establishments carefully avoid any publicity. They are sometimes conducted by off-color physicians, sometimes by typical quacks and sometimes are respectably conducted by reputable medical men. In the latter case they generally have a corporate existence and a sort of quasi-public character, and, apart from a certain commercialism in their management, are unexceptionable. Not making pretenses to being charitable institutions their financial management is not open to public criticism. Nevertheless, if we are to insure against abuses, a certain public control and inspection is advisable and—if we are to reach all the disreputable "homes" "retreats," etc., which advertise in the daily press—is absolutely necessary. A public sanction or certificate of character based on rigid inspection laws would be a damage to no reputable institution. That there is a class of institutions requiring police surveillance can not be denied. They exist in every city, and the borderline between them and more respectable institutions may not be as distinct to the public as is desirable. While we do not accept as generally correct the allegation of the Minnesota mayor that reputable physicians connive at the unlawful practices of the shady practitioners, there are evil possibilities in the existence of these institutions that we should be on our guard against as a profession, and a reform in this regard should be supported if not originated among ourselves. If a layman can point out the evil of unregulated establishments of this kind it is an indication that public opinion is getting ripe for a reform.

LAVAGE FOR THE RELIEF OF VOMITING.

Vomiting results from such a diversity of causes that it is not to be expected that one measure will suffice for its relief under all conditions. Of course, the fundamental indication is to remove, when possible, the underlying or exciting factor, but not rarely the gravity of the symptom does not permit of delay, but demands speedy relief, either by palliation or by other means. One of the most distressing secondary phenomena of vomiting is the thirst resulting from the repeated loss of fluid. To compensate for this loss and to relieve this thirst, injection of large amounts of water into the bowel or the administration of small amounts by the mouth has been practiced, but neither of these methods always succeeds. An old and valuable household remedy is the free ingestion of water as hot as can be taken—with a pinch of salt, for flavor, if desired. It is popularly said that the water will either correct the stomach or will make vomiting easy and less unpleasant if it must continue. Attention is again called to the value of this procedure by Sir William H. Bennett,[1] who has adopted the suggestion made and put into practical effect by a patient, namely, the ingestion of ordinary cold or tepid water or other perfectly unirritating fluid in as large amounts as the patient desires. The vomiting may and is likely to persist, but the stomach is gradually washed out automatically and the patient is made more comfortable. A number of illustrative cases are reported, in some of which the vomiting itself seems to have been controlled.

1. Lancet, July 8, 1905, p. 67.

Medical News

CALIFORNIA.

Bequest.—By the will of the late James C. King, Chicago, $10,000 is devised to a hospital in Pasadena, Cal., which the testator believed to be a worthy enterprise.

Hospital Incorporated.—The Oakland Central Hospital has been incorporated in Oakland by Drs. William D. Huntington, Oakland; T. A. Williamson; Edward R. Sill, Alameda; Robert T. Stratton, Alameda, and Chauncey H. Wilder, Alameda, with a capital stock of $75,000.

Will Not Change Meeting Place.—At a meeting of the San Bernardino Medical Society November 8 an attempt was made to change the by-laws so that Redlands should hereafter be the permanent headquarters of the society instead of San Bernardino. The motion, however, was voted down by the older members of the society with the assistance of the members from San Bernardino.

Charge Against Physician Dismissed.—Dr. W. Fred Stahl, Los Angeles, charged with illegal practice of medicine, was dismissed by the jury November 10. It was alleged that Dr. Stahl did not hold a license for practicing medicine from the state board of medical examiners, but the discharge of the prisoner was based, it is stated, on the contention of his attorney that he had applied three times to the state board to take the regular course, and that his application had been neglected each time.

Opposed to Lodge Practice.—Shasta County Medical Society has manifested its opposition to contract or lodge practice by adopting the following resolutions:

Whereas, It is the sense of this body that contract society and lodge practice as now performed is detrimental, degrading and humiliating to the medical profession, therefore be it

Resolved, By the Shasta County Medical Society in regular meeting assembled, that no member of Shasta County Medical Society be permitted to enter into contract relations with such society; and be it further

Resolved, That no physician in the employ of such societies be eligible to membership in the Shasta County Medical Society. Be it further

Resolved, That no member of the Shasta County Medical Society be permitted to consult with any physician following such contract practice.

Personal.—Dr. Reuben M. Bonar, Santa Rosa, has been appointed a member of the medical examining board for pensions in that city, vice Dr. Melville M. Shearer, deceased.——Dr. John H. Love, Ventura, was stricken with cerebral hemorrhage November 2.——Dr. Theodore D. Kellogg, Chino, was appointed medical superintendent of the San Bernardino County Hospital, vice Dr. Johann H. Meyer, removed, but resigned, and Dr. A. J. Aldridge has been appointed temporary medical superintendent.——Dr. John S. Hogshead, Laytonville, has been appointed physician of Mendocino County, vice Dr. William N. Moore, committed to the State Hospital for the Insane.——Dr. Solon Briggs, Los Angeles, has returned from the Atlantic Coast.——Dr. August Lilienerantz, Oakland, has resigned as a member of the board of health, and Dr. Charles A. Dukes has been appointed his successor.——Dr. Fred W. Colman has been appointed health officer of Lodi.——Dr. Spurgeon F. Priestly has been appointed health officer of Stockton.——Drs. Robert F. Rooney, Auburn, and Martin Schnabel, Newcastle, have been elected physicians of Placer County.——Dr. Jackson L. Martin has been made a member of the Fresno health board.——Dr. William J. Walsh has been appointed coroner of San Francisco County, vice Dr. Thomas B. W. Leland.——Dr. Granville MacGowan, Los Angeles, has been removed to his home after a successful operation for appendicitis.

DISTRICT OF COLUMBIA.

Milk Dealers Fined.—Three milk dealers who sold milk from cows which had been allowed to feed and drink from the sewer and marsh adjacent to the Smallpox Hospital, were arrested and tried. One was discharged and two were fined $20 each.

Health of the District.—During the week ended November 4, 118 deaths were reported, 64 white and 54 colored. During the same period 144 births occurred, 100 of which were white and 44 colored. There were 9 stillbirths, 3 white and 6 colored. At the close of the week there were under treatment 44 cases of diphtheria, 16 of scarlet fever, 160 of typhoid fever and 8 of smallpox.

ILLINOIS.

Cornerstone Laid.—The cornerstone of the John Warner Hospital, Clinton, was laid with simple formalities November 8.

Personal.—Dr. James H. Davis, Atwater, has returned after three years in Germany.

Diphtheria.—Reports to the State Board of Health show that cases of diphtheria are reported in 39 cities and towns, in 26 counties, from Cook County on the north to Alexander County on the south.

Epidemic Jaundice.—An epidemic of catarrhal jaundice, the cause and nature of which is obscure, is reported throughout the state, especially in Mount Pulaski and Rushville. The State Board of Health has instituted an investigation.

Valley Physicians Meet.—The eighty-first semi-annual meeting of the Fox River Valley Medical Association was held in Aurora, November 13. Dr. J. Forrest Bell, Elgin, was elected president, and Dr. Albert A. Fitts, Batavia, vice-president. The annual meeting will be held in Elgin in May.

Chicago.

Druggist's License Revoked.—The pharmacy license of Paul Vito, owner of two drug stores on the South Side, has been revoked by the State Board of Pharmacy on account of two convictions for the sale of cocain.

Bequests.—By the will of James C. King $10,000 is devised to the Chicago Home for Incurables and $20,000 to the Presbyterian Hospital.——The late Louis Schroeder has bequeathed $1,000 each to the Michael Reese Hospital, Alexian Brothers' Hospital and the German Hospital.

Personal.—Dr. Emma A. Hackett, resident physician at Hull House, is seriously ill from an infection of the hand due to an operation wound.——Dr. Engelbrecht Nelson has returned from abroad.——Dr. Albert H. Andrews has been elected professor of otology and rhino-laryngology in the Chicago Eye, Ear, Nose and Throat College.

Fraud Order Issued.—A fraud order against "Professor" Howell has been issued by the postoffice department. It is alleged that this individual, on receipt of the date of the birth of customers, sent to each a horoscope, telling him that he was suffering from a dangerous nervous disease. For the cure of this malady he sold a medicine for $4.80. Horoscopes of twelve varieties were distributed.

Urological Election.—The Chicago Urological Society, at its annual meeting, October 26, elected Dr. William L. Baum, president; Dr. Gustave Kolischer, vice-president, and Dr. J. Allen Patton, secretary. This society meets the last Thursday of each month excepting July, August and September. All regular practitioners in good standing in Cook County who are interested in medical or surgical urology are eligible to membership and welcomed at meetings.

Deaths of the Week.—During the week ended November 18, 510 deaths were reported, equivalent to an annual mortality rate of 13.35 per 1,000. The number of deaths was 31 greater than during the corresponding week of 1904, and 41 greater than for the preceding week of 1905. Pneumonia, for the first time this season, leads the death causes with 77, followed by consumption, with 70; nephritis, with 41; violence, including suicide, with 37; heart disease, with 36; cancer, with 31, and nervous diseases, with 21.

INDIANA.

Contagious Diseases.—Scarlet fever is reported at Windfall. Ten cases of typhoid fever are reported at Cambridge City.

Ten Instead of One.—In the Indiana news, November 18, it was announced that James Laboyteaux had given $1,000 for the erection of a hospital at Muncie, and that, if necessary, he would double his gift. Mr. Laboyteaux' original gift was $10,000, which he has promised to double, if necessary.

Personal.—Dr. Richard Schillinger has been elected mayor of Richmond.——Dr. Ebenezer P. Weist, Elwood, who soon leaves for Oklahoma, was given a dinner by the physicians of Newcastle November 10.——Dr. Isaac N. Cochran has been elected mayor of Delphi.——Dr. Oliver G. Mercer, Reelsville, has been appointed local surgeon of the Vandalia Road, vice Dr. Joseph F. Gillespie.

October Mortality and Morbidity.—The reports to the State Board of Health for October show that typhoid was the most prevalent disease and rheumatism the next most prevalent. Bronchitis, influenza and pneumonia prevailed extensively. On the whole, however, October was more healthful than the corresponding month last year, and also more healthful than September. The total number of deaths reported was 2,681, equivalent to an annual death rate of 11.9 per 1,000. Of these 426, or 16.9 per cent., were under 1 year of age, and 659, or 26.2 per cent., were 65 and over. Consumption deaths numbered 307; typhoid, 152; diphtheria, 78; scarlet fever, 5; whooping cough, 14; pneumonia, 138; diarrheal diseases, 167; cerebrospinal meningitis, 29; influenza, 4; puerperal fever, 9; cancer, 100, and violence, 155. Pneumonia showed a decided increase over September, and there were 30 more deaths from this disease than in the same month last year. Of the tuberculosis deaths 124 were males and 283 females. Of the males 22 were married in the age period of 18 to 40, in the prime of life, and they left 45 orphans under 12 years of age. Of the females 54 were in the age period of 18 to 40, in the prime of life, and left 111 orphans under 12 years of age. This disease invaded 271 families and tore the parents from 94 homes, making in all 156 orphans.

KENTUCKY.

Fraud Order Issued.—The postoffice department has issued a fraud order refusing the delivery of mail matter to the French Capsule Company, Covington, and to Dr. Ernest E. Schmidt of that city, who are alleged to be using the mails to promote the sale of a drug contrary to law.

Jefferson County Referee.—Dr. William H. Wathen, for a number of years county referee for the State Board of Health, has resigned, and Dr. William Bailey has been appointed in his stead. The executive committee, acting for the board, with Dr. Chester Mayer, temporary secretary, spread resolutions on its minutes expressing satisfaction at Dr. Wathen's work. Dr. Wathen, being dean of the Kentucky School of Medicine, felt it best that he should not continue to act in a dual capacity.

MARYLAND.

Personal.—Dr. Gordon T. Atkinson, Crisfield, has been re-elected comptroller of the state.——Dr. William Winder Goldsborough, Greensboro, has been elected a member of the state senate.

University Attendance.—There are 331 matriculants in attendance at the University of Maryland, of whom 99 are in the medical department, the remainder in the departments of pharmacy and dentistry.

Debt to be Paid.—The floating debt of $4,000 of the Western Maryland Hospital, Cumberland, will be wiped out, the state having appropriated $2,000 and an equal amount having been raised by private subscription.

State Examination.—The Board of Medical Examiners of Maryland will hold the regular examination December 13 to 16 at the hall of the Medical and Chirurgical Faculty of Maryland, 847 North Eutaw Street, Baltimore. Applications will not be received after December 7.

Society Election.—The Washington County Medical Society met last week and elected the following officers: President, Dr. Luther H. Keller, Hagerstown; vice-president, Dr. W. S. Richardson, Williamsport; secretary, Dr. Victor D. Miller, Jr., Hagerstown; treasurer, Dr. Hamilton K. Derr, Hagerstown, and censor, Dr. D. C. R. Miller, Mason and Dixon, Pa.

Hospital Report.—At the Springfield Hospital for the Insane there were 662 patients, of whom 388 are male and 274 female. The Edwin Warfield Cottage, named after the governor, will be ready for occupancy in about four weeks, and will accommodate about 60 additional patients. The managers are gradually providing artesian wells and thus doing away with the use of surface water at the institution.

Baltimore.

Bequests.—The late Dr. Charles C. Shippen left $5,000 each to St. Paul's Protestant Episcopal church and the Charity Organization Society.

Hospital Staff Changes.—Four of the resident physicians at the City Hospital have resigned: Drs. Robert Wriston, West Virginia; Alfred Brinham, Maryland; Edwin Bledsoe, Virginia, and George Berkheimer, Pennsylvania. Their places have been supplied by Drs. Lamar, Kentucky; Downey, Virginia; W. A. Glines, New York, and F. E. Knowles, New Jersey.

Mushroom Poison Antitoxin.—It is announced that Dr. W. W. Ford, instructor in bacteriology at the Johns Hopkins University, has discovered an antitoxin for mushroom poisoning. By boiling and filtering the poisonous species he obtained a toxin with which, by the same process that was used with the diphtheria antitoxin, he immunized small animals, thus obtaining a protective serum. The substance has not been tried yet in a human being.

St. Luke's Day Service.—A special service was held at Grace Protestant Episcopal church Sunday, November 19, for physicians, medical students and nurses. For many years such a service has been held in St. Paul's cathedral on St. Luke's Day, October 18. The sermon was preached by Bishop Court-

land Whitehead of Pittsburg, chaplain of the St. Barnabas Guild for Nurses of America. After the sermon Dr. Howard A. Kelly addressed the audience.

Personal.—Dr. Henry Barton Jacobs returned to Baltimore November 13.——Dr. Randolph Winslow has been elected chairman of the section on clinical medicine and surgery, Medical and Chirurgical Faculty of Maryland, also consulting surgeon to the Hebrew Hospital.——Dr. Roland B. Whitridge will spend the winter in Europe.——Dr. Fairfax G. Wright, assistant medical superintendent of the University Hospital, has been ill with an infected wound of the hand.

MASSACHUSETTS.

Hospital Opened.—The remodeled Holyoke City Hospital was formally opened for inspection November 1.

Check for Hospital.—George E. Keith, Brockton, gave a check for $500 to the Brockton Hospital on the occasion of the dedication of the Douglas Surgical Pavilion and the Wales Memorial Ward, October 31.

Would Prohibit Animal Experimentation.—It is said that there will be introduced in the legislature this winter an "act to prohibit all experiments under any circumstances and for any purpose whatsoever, with or without an anesthetic, on dogs and cats." It is anticipated that physicians and the friends of science and progress and humanity in Massachusetts will be ready to oppose such legislation.

Superintendent of Leprosarium.—Dr. Louis Edmonds of Harwich, who has been associate medical examiner of Barnstable County, has resigned, in order to become superintendent of the new State Leper Colony, to be located on Penikese Island, fourteen miles from New Bedford. There are at present five lepers, two Chinese and three Portuguese, one of the latter being a woman, who will be moved with Dr. Edmonds from Harwich, where for a year he has had charge of them.

Tuberculosis Exhibition.—A free tuberculosis exhibit under the auspices of the State Board of Health is to be opened in Faneuil Hall, December 28. The project is the result of the efforts of the Boston Association for the Relief and Control of Tuberculosis and is backed by a state appropriation of $2,000. For ten days there will be lectures and demonstrations, both day and evening. Much literature in several different languages will be distributed and explained. Apparatus and demonstrations of methods for the prevention and cure of the disease will be presented in great detail and specific efforts will be made to popularize the exhibits. Reciprocal arrangements, too, have been made for the display of the entire New York City exhibition, whose date precedes this one in Boston.

Tufts College News.—Tufts College Medical School opened September 27 with a large entering class. There are now 379 students, of whom 109 are in the entering class. The following changes in the faculty have been made: Dr. Charles P. Thayer has retired as secretary because of ill health, and has been made emeritus professor of anatomy and has had bestowed on him a substantial pension; Dr. Frederick M. Briggs has been made secretary; Dr. Harry H. Germain has been appointed assistant professor of anatomy; Dr. Karl August Hoch, instructor in neuro-pathology, has resigned; Dr. Frederick C. Hollis, formerly of Yale Medical School, has been appointed instructor in medical chemistry; Drs. C. H. Staples and L. W. Strong, assistants in hematology; Dr. Edwin B. Neilson, assistant in gynecology; Dr. John D. Clark, instructor in anatomy; Dr. Theo. C. Beebe, Jr., assistant in surgery and assistant demonstrator of anatomy; Drs. John W. Lane, George McIntire, F. E. Haskins and Robert E. Andrews, assistant demonstrators in anatomy; Drs. Edison W. Brown and Leon S. Medalia, assistants in pathology and bacteriology, and Drs. Sidney C. Hardwick and Margaret E. Carley, assistants in physiology.

MICHIGAN.

Scarlet Fever Closes Schools.—Because of the prevalence of scarlet fever on the east side of the town, the school board of Elk Rapids has deemed it advisable to close the schools for a time. Rigid quarantine is being enforced.

Vote for Detention Hospital.—By a vote of 234 to 49 Ann Arbor has decided to raise $8,000 for a detention hospital for contagious diseases, to be built and equipped by the city, but to be maintained by the University of Michigan.

Personal.—Dr. Henry G. Glover, Jackson, has moved to Philadelphia, and Dr. H. T. Brown, Stockbridge, succeeds to his practice.——Dr. John B. Wright, Detroit, is ill with pneumonia at Grace Hospital.——Dr. Herbert M. Best, Ludington, has returned from the Pacific Coast and will practice in Grand Rapids.

Copper Range Changes.—Dr. Addison D. Aldrich, formerly of the Champion Mining Company, has been appointed physician at the Challenge mine, Hancock.——Dr. W. D. Whitten, formerly surgeon to the Quincy Mining Company, has been appointed physician at the Baltic mine.——Dr. William E. MacNamara, Brighton, has succeeded Dr. Cole at Redridge.——Dr. William K. West, Calumet, has been appointed chief surgeon of the Copper Range Mining Company and will reside at Painesdale.

Lockwood Hospital Report.—The annual report of the treasurer of Lockwood Hospital and Deaconess Home, Petoskey, for the fiscal year ended July 31, 1905, shows total receipts from all sources of $6,357.68, and total expenditure of $6,299.03, leaving a balance in hand of $858.65. The loss in operating the institution for the year 1903 was $2,393.10; for the year 1904, $949.63, and for the year 1905, $200.60. During the fiscal year 216 patients were admitted to the hospital, 201 discharged, 12 died and 16 remained in the hospital at the close of the year.

October Mortality.—There were 2,838 deaths reported for October, or about 200 fewer than in the preceding month. The death rate was 13.1 per 1,000 population, somewhat higher than the rate for October, 1904, which was 12.0. By ages there were 691 infants under 1 year, 219 children aged 1 to 4 years, and 747 deaths of elderly persons over 65. Important causes of death were as follows: Tuberculosis of the lungs, 190; typhoid fever, 102; diphtheria, 57; scarlet fever, 11; measles, 2; whooping cough, 13; pneumonia, 97; diarrhea and enteritis of infants, 357; cancer, 141; accidents and violence, 175. There was a very marked increase in the number of deaths from typhoid fever, and the number of deaths occurring from this cause, 102, was the largest reported for any month since the year 1900.

Wayne County Society on Vaccination.—Wayne County Medical Society, at its meeting October 1, put itself on record against the action of the superintendent of schools of Detroit in allowing children to enter school without having been vaccinated, by adopting the following resolutions:

Whereas, The superintendent of public schools of the city of Detroit on September 16 issued an order to the principals of all the public schools in this city directing them to admit pupils applying for admission to the public schools, whether they had been vaccinated or not; and,

Whereas, This action throws down all legal safeguards for protecting the public school children from the remarkably contagious disease, smallpox, and is directly contrary to a standing order of the school board still unrepealed; and

Whereas, Smallpox has been continually prevalent in the state of Michigan for the last four years; and

Whereas, The Supreme Court of the United States has held legal the right of the state to impose compulsory vaccination;

Resolved, That the Wayne County Medical Society considers this action on the part of the superintendent of Detroit's public schools an assumption of authority not belonging to his office, a dangerous and indefensible action and a serious menace to the city of Detroit.

NEW JERSEY.

Diphtheria.—The public schools of Winslow have been closed on account of an epidemic of diphtheria.——Several cases of diphtheria are reported from Elizabeth.

Personal.—Dr. William V. McKenzie, Metchuen, is seriously ill and it is feared that he will have to give up practice.——Dr. Calvin Anderson has been elected mayor of Madison.——Dr. Joseph H. North, Jr., has been elected mayor of Pleasantville.

Gifts to Hospitals.—The Entre Nous Club Atlantic City, has given $5,000 to the Atlantic City Hospital for the endowment of a bed in that institution.——Mrs. Harvey E. Fisk has sent a check for $500 to the Monmouth Memorial Hospital and will also endow a bed.

To Start Medical Library.—For the purpose of organizing a medical library association for the use of physicians of Essex County and vicinity, a call was issued for a meeting in Newark November 18. The object of the proposed society is twofold: First, the establishment of a technical working library of practical value to physicians and which will receive the co-operation of the public library authorities in its maintenance and growth; and, second, the creation of an independent medical organization.

Verdict Set Aside.—The Supreme Court has rendered an opinion in which it sets aside the verdict obtained by George Lees, Plainfield, against Dr. Albert Wickman, Newark. In October, 1904, Lees sued for $20,000 for injuries alleged to have resulted from the improper application of a plaster jacket, and was given a verdict by a Somerset County jury for $780.20. At the trial it was shown by expert testimony that the injuries alleged could not have been the result of any treatment applied. The Supreme Court held that the verdict of the lower court was contrary to the evidence.

Italian Hospital Opened.—The new Hospital of the Immaculate Conception, Orange, was opened October 29 with due ceremony. The institution has now 25 beds and in a few days accommodation for 10 additional patients will be added. The medical staff consists of Drs. Thomas N. Gray, East Orange; Frank B. Lane, Orange; William O'Brien, West Orange; Antonio J. Amico, Newark; Ralph H. Hunt, East Orange; Frances E. Knowles, South Orange; W. D. Garrett, East Orange; M. W. Newcomb, East Orange; Carlo Martinetti, Orange; M. Herbert Simmons, Orange; Frank W. Lockwood, East Orange, and Charles W. Banks, East Orange.

NEW YORK.

Red Cross.—The first annual meeting of the New York state branch of the American Red Cross was held in New York City November 14. This society has 374 members. It is the intention of the state branch to organize subdivisions throughout the state. An interesting feature is the enrollment of doctors and nurses for emergency service. Drs. George E. Brewer, Samuel E. Lambert and John W. Brannan have consented to act as the advisory committee.

Charity Workers.—The New York State Conference of Charities and Corrections was in session in Carnegie Lyceum on November 14 and 15. Dr. Thomas Darlington, health commissioner of this city made an address at the opening session. In reviewing the important philanthropic events in the state during the past year he mentioned the passage of a special charities appropriation bill, instead of leaving the appropriations a part of the general bill, and the undertaking by the city of New York of establishing a tuberculosis sanitarium on Staten Island. The subject of the care and relief of needy families in their homes was discussed by Dr. Lee K. Frankel. He placed the total value of philanthropic agencies in New York state at $100,000,000 and the annual expenditure for the care of the poor and afflicted not less than $23,000,000. It was to be regretted that this large expenditure was not rather for the prevention of future ills than for the palliation of suffering already existing. A committee is looking into the matter of keeping accounts and the better financial administration of the hospitals. Dr. E. D. Shiner told what had been done by schools in the way of training atypical children and advocated a further development of the plan. The treatment of criminals, social betterment and the elimination of politics from charitable institutions was also discussed.

New York City.

Seagoers.—Dr. and Mrs. Calvin T. Adams sailed on the *Moltke* November 15.——Dr. L. P. Williamson, United States Navy, sailed on the *Minnetonka*, for London, November 18.

Italian Sanitarium.—City officials and leaders have interested themselves in the Harlem Italian Sanitarium, which was established a year ago by Dr. C. Atonna, Dr. F. Sanarelli and Mr. Caterain, and which is doing good work among the poor dwellers of the uptown Italian colony. At a recent benefit sufficient funds were raised to put the hospital on a permanent basis.

Good Health of the City.—The death rate of the city for the week ending November 11 was at the annual rate of 14.89 per 1,000. There are practically no contagious diseases at present. Among 600,000 school children there were only five deaths. Deaths from pneumonia have fallen to 60 and from tuberculosis to 74. Deaths from violence and suicide were most numerous.

Contagious Diseases.—There were reported to the sanitary bureau for the week ending November 11, 335 cases of tuberculosis, with 160 deaths; 275 cases of diphtheria, with 22 deaths; 155 cases of measles, with 8 deaths; 105 cases of typhoid fever, with 12 deaths; 96 cases of scarlet fever, with 5 deaths; 13 cases of cerebrospinal meningitis, with 7 deaths, and 62 cases of chickenpox.

The Seaside Hospital.—The report of the society which supports this hospital shows that $90,000 has been raised during the past year, of which sum $3,000 remains in the bank after paying an indebtedness of $25,000 and paying the running expenses of the past year. During the past summer 33,661 mothers and children were cared for on the hospital boat, and 2,521 patients were admitted to the Seaside Hospital. It is the present object of the society to keep this institution open during the winter as a convalescent hospital; so there is great need of such an institution in or near the city. Dr. Ernest J. Lederle was elected one of the trustees.

OHIO.

Diphtheria.—Diphtheria is reported in North Amherst.——Bergholz is reported to have more than 20 cases of the disease.

Goes to Penitentiary.—"Dr." Charles Lewellyn, Youngstown, has been sentenced to imprisonment for one year in the penitentiary for impersonating a United States pension officer.

Violator of Law Fined.—W. W. Hodgkins, Toledo, pleaded guilty in the police court November 15 to practicing medicine without being registered, as being required by law, and was fined $50 and costs, but the fine was suspended until November 25 to give the defendant an opportunity to comply with the law.

Ill and Injured.—Dr. Phineas S. Conner, Cincinnati, is seriously ill from nervous trouble at the Good Samaritan Hospital.——Dr. William D. Hamilton, Columbus, was operated on for appendicitis in Chicago November 15.——Dr. Jerome Bland, Bucyrus, who has been seriously ill from cerebral hemorrhage, was taken to Hot Springs, Ark., for treatment November 14.

Farewell Banquets and Presentation.—The medical staff of the National Military Home, Dayton, gave a farewell banquet to Dr. D. Clark Huffman, formerly chief surgeon of that institution, October 31, at which he was presented with a loving cup.——On November 1 the officers of the home met and presented Dr. Huffman with a beautiful mantel clock.——The Guernsey County Medical Association gave a banquet at Cambridge, October 31, in honor of Dr. Frank M. Mitchell, president of the association, who left for his new home in Greeley, Colo., two weeks later.

Personal.—Dr. Charles C. Booth has been appointed local surgeon for the Lake Shore Road at Youngstown, vice Dr. Albert E. Warren, deceased.——Dr. Albert McClintock, New Moorefield, has returned from Raton, N. M.——Dr. Isaac C. Kiser, Fletcher, has been elected coroner of Miami County.——Dr. James A. Hubbell has been elected mayor of Quincy.——Dr. Robert Henderson, Urbana, has been elected a member of the board of public safety.——Dr. David N. Kinsman, Columbus, has been elected secretary of the State Board of Medical Examination and Registration, to succeed Dr. Frank Winders, resigned. This will necessitate Dr. Kinsman's resignation as chancellor of the Ohio Medical University.——Dr. William N. Bradford has been elected mayor of Cambridge.

PENNSYLVANIA.

Bequest.—By the will of the late Frank F. Risinger, the York Hospital will receive $5,000.

Personal.—Dr. J. Trechler Butz of Allentown, Pa., has been elected coroner of Lehigh County.

Antitoxin Stations Established.—Dr. Samuel G. Dixon, state commissioner of health, has established 500 stations throughout the state for the free distribution of antitoxin to the needy poor. The antitoxin can only be secured by personal application of the physician attending the case. Free antitoxin used by the state is made especially for it and bears a special label.

Philadelphia.

Northeast Branch to Organize.—It is announced in the roster of the county medical society that a meeting of medical men of the northeastern section of the city will be held November 27, to organize a northeast branch of the county society.

The Mütter Lecture.—The Mütter lecture for 1905 will be delivered in the hall of the College of Physicians, Thirteenth and Locust Streets, on Friday, December 1, at 8:30 p. m., by Dr. Aloysius O. J. Kelly on "Infections of the Biliary Tract."

Discharged.—Dr. Thomas B. Williams, who was arrested two weeks ago on the charge of having performed an illegal operation, has been discharged from custody, as the woman, her husband and the physician who was called in to attend her, failed to appear as witnesses.

Health Report.—The deaths from all causes in the city for the week numbered 407, which is a decrease of 31 from the number reported last week, and an increase of 6 over the number reported in the corresponding period of last year. The principal causes of death were: Typhoid fever, 6; whooping cough, 3; diphtheria, 11; tuberculosis, 47; cancer, 16; diabetes, 5; apoplexy, 25; heart disease, 37; acute respiratory disease, 63; enteritis, 18; Bright's disease, 32; suicide, 6; accidents, 26, and marasmus, 6. There were 253 cases of contagious disease, with 18 deaths, as compared with 251 cases and 18 deaths the preceding week.

Bequests.—By the will of the late Mrs. Nancy W. King of Doylestown, Pa., the Episcopal Hospital of Philadelphia receives $5,000 for the endowment of a free bed.——By the will of the late G. E. Gillingham the Pennsylvania Hospital receives $50,000; the Philadelphia Home for Incurables, $5,000; The Women's Medical College of Pennsylvania, in Philadelphia, $5,000, to be used for founding and maintaining a schol-

arship in said college; the Hospital of the Good Shepherd in Rosemont, Pa., $5,000 for founding and maintaining a free bed and other purposes, in the name of his deceased wife, Clara D. Gillingham; the Bryn Mawr Hospital, $5,000 for founding and maintaining a free bed in the name of his deceased wife, Clara D. Gillingham; the Maternity Hospital of Philadelphia, $5,000, and the Charity Hospital of Norristown, Pa., $5,000.

VIRGINIA.

Want Tax Abolished.—The Richmond Academy of Medicine has appointed a committee to try to have the city license tax abolished; a similar work will be pushed in the legislature in regard to the state license.

City Bacteriologist.—Richmond has just passed an ordinance creating the office and defining the duties of a city bacteriologist. The salary is $900 per year and the position is filled by election by the members of the board of health.

Physicians Raise Fees.—The Norfolk Medical Society has decided that calls responded to between 9 p. m. and 7 a. m. are to be considered night calls, and such visits shall be charged for at the rate of $5. It was considered wise to bring this matter before the public through the daily press.

Establishment of a Tuberculosis Sanitarium.—At the invitation of Dr. William F. Drewry, superintendent of the Central State Hospital, Petersburg, a number of physicians from different sections of the state met in Petersburg. The treatment of tuberculosis was discussed and the proposition to establish a sanitarium for this disease at Ironville, Bedford County, was considered. A considerable tract of land has already been secured, some cottages erected and a few patients are now under treatment.

GENERAL.

Yellow Fever in Havana.—The health officials of Havana, Drs. Finlay and Delgado, have officially notified the United States Public Health and Marine-Hospital Service of the presence of five cases of yellow fever and of several suspects in that city.

Wabash Surgeons' Association.—At the meeting of the Wabash Railroad Surgeons' Association, November 10, Dr. C. B. Powell, Albia, Iowa, was elected president, and Dr. Christian B. Stemen, Fort Wayne, was re-elected secretary, a position which he has held for the last twenty-four years.

College Association to Meet.—The annual meeting of the Southern Medical College Association will be held in one of the parlors of the Seelbach Hotel, Louisville, Ky., at 10 a. m., Monday, December 11, which is the day preceding the meeting of the Southern Surgical and Gynecological Association. The secretary is Dr. G. C. Savage, Nashville, Tenn.

Yellow Fever Subsides.—Pensacola, on November 12, reported that there was not a case of yellow fever under treatment, but a new one was reported the next day. Florida quarantines were removed on November 19.——Texas alone maintains quarantine, except that there is general quarantine against Havana.——Texas did not participate in the quarantine conference.——New Orleans, on November 11, had two cases under treatment and no new cases reported for the previous four days.——In Louisiana, outside New Orleans, there remain only some half-dozen cases in all.

Meeting of Western Bellevue Alumni.—The fifth annual meeting and dinner of the Western Alumni Association of the University and Bellevue Hospital Medical College was held at the Sherman House, Chicago, November 10. The president, Dr. Charles C. Hunt, Dixon, Ill., acted as toastmaster. The following officers were elected: President, Dr. John M. Ristine, Cedar Rapids, Iowa; vice-presidents, Drs. Calvin M. Fitch, Chicago; James F. Percy, Galesburg, Ill., and Dr. Frederick W. Werner, Joliet, Ill.; secretary-treasurer, Dr. Willis O. Nance, Chicago, and executive committee, Drs. G. Frank Lydston, Chicago; Paul Caspers, Chicago; James F. Todd, Chicago; John W. Van Winkle, Chicago, and Charles C. Hunt, Dixon, Ill.

Ohio Valley Medical Association.—The Ohio Valley Medical Association met in Henderson November 8 and 9. The following officers were elected: Dr. Daniel M. Griffith, Owensboro, Ky., president; Drs. Brooks F. Beebe, Cincinnati, H. Preston Sights, Paducah, Ky., and Curran Pope, Louisville, vice-presidents, and Dr. Benjamin L. W. Floyd, Evansville, Ind., secretary and treasurer (re-elected). Louisville, Ky., was selected as the next place of meeting. The association appointed a committee to work up a sentiment in the different states in the Ohio Valley regarding the proper care and treatment of inebriates by the state, with Dr. Dudley S. Reynolds, Louisville, as chairman. A resolution was also adopted asking the Kentucky State Legislature to have a bust of Dr. Ephraim McDowell placed in the Capitol in Washington.

The Southern Quarantine Conference.—Following is the full text of the quarantine resolutions which were unanimously adopted by the conference of southern states, to which we referred last week:

QUARANTINE RESOLUTIONS.

WHEREAS, The experience of recent years, and especially the experience of this year, have demonstrated beyond cavil that the house mosquito, known as the *Stegomyia fasciata*, is the sole known cause of yellow fever epidemics and have demonstrated the futility and nuisance of many antiquated methods of quarantine hitherto resorted to, and the wisdom and necessity, in the interest of the public health and the public business, of uniform regulations to prevent the importation into the United States of yellow fever and its spread from state to state in the unfortunate event of its introduction; now, therefore, be it

Resolved, That we, delegates from Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, Maryland, North Carolina, South Carolina, Tennessee, Virginia and West Virginia, hereby respectfully request the Senate and House of Representatives in Congress assembled to enact a law whereby coast maritime and national frontier quarantine shall be placed exclusively under the control and jurisdiction of the United States Government, and that matters of interstate quarantine shall be placed under the control and jurisdiction of the United States Government, acting in co-operation with the several state boards of health.

We, furthermore, respectfully request that congress shall make adequate appropriation to enforce and perfect the objects of this memorial and to stamp out as nearly as practicable the yellow fever-carrying mosquito in its breeding or living places in the United States, and by negotiating arrangements with the governments of Central and South America and the West India islands, in places where the said mosquito has its breeding places or exists in said countries.

Resolved, second, That we urge on the legislatures of the several southern states that they enact quarantine regulations as nearly as possible in accord and conformity as hereafter enacted.

We, furthermore, urge the governors of the said several states with the above object in view specifically to call the attention of the legislatures of their respective states to the wisdom and policy of this course.

The Norfolk *Virginian-Pilot*, November 12, said editorially:

The Southern Quarantine and Immigration Conference has in our opinion, acted wisely in adopting a resolution requesting congress to enact a law "whereby coast, maritime and national frontier quarantine shall be placed exclusively under the control and jurisdiction of the United States Government," and the *Virginian-Pilot*, for one, earnestly hopes that the suggested legislation will be speedily enacted.

In our opinion, the South is the section of the country which will derive the most benefit from national control, and every southern representative, who has the best interests of his section and his country at heart, should not hesitate to declare in its favor.

The New Orleans *Democrat*, November 11, said:

There can be no question whatever of the jurisdiction of the Federal Government in regard to interstate quarantine affairs, its absolute constitutional jurisdiction, and some day this will be recognized as fully by all that there will no longer be any objection to its assuming sole charge of them.

American Tuberculosis Exhibition.—This exhibition, as we announced two weeks ago, will be held in the American Museum of Natural History, New York City, November 27 to December 9, under the auspices of the National Association for the Study and Prevention of Tuberculosis and the Committee on the Prevention of Tuberculosis of the Charity Organization Society of New York City. Chief stress is to be laid on a popular presentation of the facts of the situation and the approved methods of prevention and cure. This will be done by charts, tables, photographs, plans, models and apparatus. The co-operation from sanatoria of standing in the United States and Canada has been particularly cordial, and both public and private institutions from all parts of the country will be elaborately represented. A representative collection of material from the recent exposition in Paris will form an attractive feature. Models of various tents and buildings for open-air treatment will be given a prominent place. A series of public meetings has been arranged. On the opening night the principal address will be by Mr. Talcott Williams, of Philadelphia, while brief addresses will also be made by Mayor McClellan, of New York, by Dr. Darlington, commissioner of health, and by President Jesup, of the museum. Wednesday evening, November 29, at a special meeting devoted to tuberculosis and the trades, the principal address will be by Mr. Graham Taylor, Chicago, with short addresses by President Gompers, of the American Federation of Labor, and other well-known representatives of organized labor. Friday evening, December 1, at a special meeting for physicians, addresses will be made by Drs. Lawrence F. Flick, Philadelphia; W. A. Evans, Chicago; A. Jacobi, New York; Vincent Y. Bowditch, Boston, and others. Friday, December 8, at a meeting for the teachers of the public schools, Dr. S. A. Knopf, New York, will speak. The New York Board of Education is cordially aiding the movement and is officially urging the teachers to attend the meeting and exhibition. The committee is in receipt of numerous requests from other cities for the loan of the material. The National Association for the Study and

Prevention of Tuberculosis is also endeavoring to form one or more traveling exhibits on a smaller scale which may be packed in small compass and kept constantly on the move, being exhibited in towns and villages where it would be impossible to arrange for or to finance a large exhibition. A special exhibition of pathologic material has been installed, the nucleus of which is formed by contributions from the Phipps Institute in Philadelphia and the Laboratory at Saranac Lake. Sanatorium physicians are specially asked to meet on the afternoon of December 1. Further information may be obtained from Mr. Livingston Farrand, secretary, 105 East Twenty-second street, New York.

National Tuberculosis Association Nomenclature.—We publish below the report of the committee on nomenclature to the National Association for the Study and Prevention of Tuberculosis, presented at the annual meeting in Washington. The association is anxious to have the proposed system tested by physicians in sanatoria and hospitals in order that criticism based on experience may be received. The executive secretary of the association is Dr. Livingston Farrand, 105 East Twenty-second Street, New York City. The report recommends the use, with additions thereto, of Turban's scheme for a method of comparative statistics for pulmonary tuberculosis. This is now used by the International Association for the Prevention of Tuberculosis in Europe. Following is a translation, with some modifications, from *Tuberculosis*, the monthly publication of the Central International Bureau for the Prevention of Consumption, September, 1904 (Johann Ambrosius Barth, Leipsig).

TURBAN'S SCHEME.

1	Extent of disease in the lungs.	I II III	For exact definition see below.
2	How long consumptive?	3 months..	Period to date from the observation of the first clinical symptoms, e. g., stubborn coughing, hemoptysis, pleurisy, loss of flesh, etc.
3	General condition of the patient.	A..... X.....	A = favorable. X = unfavorable.
4	Digestion.....	B..... Y.....	B = unimpaired. Y = impaired.
5	Pulse.....	.....	The pulse is to be registered every morning and evening, the patient resting.
6	Temperature..	F..... f.....	F = Maxima for the day over 101 F. f = Maxima for the day from 99 F. to 101 F.
		t n.....	t n = normal temperature (mouth).
7	Tubercle bacilli.	+..... 0.....	+ = tubercle bacilli present. 0 = tubercle bacilli absent.
8	Tuberculous complications.	Larynx....	Name of the organ suffering from tuberculosis.
9	Other complications.	.....	Name of the disease.
10	Result of treatment.	.....	(Vide classification of results of treatment proposed by committee on nomenclature.)

DEFINITION OF THE EXTENT OF DISEASE IN LUNGS, ACCORDING TO TURBAN.

I. Slight lesion extending at most to the volume of one lobe or two half lobes.

II. Slight lesion extending further than I, but at most to the volume of two lobes; or severe lesion extending at most to the volume of one lobe.

III. All lesions which in extent of the parts affected exceed II.

By "slight lesion" we understand disseminated centers of disease which manifest themselves physically by slight dullness, by harsh, feeble, or broncho-vesicular breathing, and by râles.

By "severe lesion" we mean cases of consolidation and excavation such as betray themselves by marked dullness, by tympanitic sounds, by very feeble broncho-vesicular, bronchial, or amphoric breathing, by râles of various kinds.

Purely pleuritic dullness, unless marked, is to be left out of account; if it is serious, the pleurisy must be specially mentioned under the head of "tuberculous complications."

The volume of a single lobe is always regarded as equivalent to the volume of two half lobes, etc.

ADDITIONS BY THE COMMITTEE.

PROPOSED CLASSIFICATION OF CASES AND RESULTS OF TREATMENT IN PULMONARY TUBERCULOSIS, TO BE USED IN CONNECTION WITH TURBAN'S SCHEME.

Progressive; (Unimproved). All essential symptoms and signs unabated or increased.

Improved: Constitutional symptoms lessened or entirely absent; physical signs improved or unchanged; cough and expectoration with bacilli usually present.

Arrested: Absence of all constitutional symptoms; expectoration and bacilli may or may not be present; physical signs stationary or retrogressive; the foregoing conditions to have existed for at least two months. (The length of time mentioned is of course somewhat arbitrary, but is intended to cover the cases which frequently occur, where the patients leave a sanatorium for various reasons, contrary to advice, after a stay of a few weeks, although all active symptoms may have ceased completely soon after entrance.)

Apparently Cured: All constitutional symptoms and expectoration with bacilli absent for a period of three months; the physical signs to be those of a healed lesion.

Cured: All constitutional symptoms and expectoration with bacilli absent for a period of two years under ordinary conditions of life.

Incipient (Favorable): Slight initial lesion in the form of infiltration limited to the apex or a small part of one lobe. No tuberculous complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent.

Moderately Advanced: No marked impairment of function either local or constitutional. Localised consolidation moderate in extent with little or no evidence of destruction of tissue; or disseminated fibroid deposits. No serious complications.

Far Advanced: Marked impairment of function, local and constitutional. Localised consolidation intense; or disseminated areas of softening; or serious complications.

Acute Miliary Tuberculosis.

PLAN SUGGESTED BY THE COMMITTEE ON NOMENCLATURE FOR TABULATION OF CASES FOLLOWING TURBAN'S SCHEME.

Name		Condition.	Amount of Involvement.	Duration of Disease.	General Condition.	Digestion.	Range of Pulse.	Max. Temp. for 24 hrs. Prec. T. R.*		Complications.	
										Nontub.	Tub.
Mr. X.	On admission	Advanced	II	3 mo.	Favorable.	Impaired.	76-100	100	+	Neg.	Neg.
	At discharge.	Arrested.	II	9 mo.	Favorable.	Unimpaired.	76	98.6	0		

* Absence or presence of tubercle bacilli to be determined only after repeated examinations while patient is under observation.

CANADA.

More Insanity in Montreal.—Insanity is said to be increasing in Montreal. In 1898 the commitments for insanity numbered 158; in 1900, 174; in 1904, 251; this year, 171 up to November 1.

Smallpox in Ontario.—Thirty cases of smallpox have developed in a township near Peterboro, Ont.——Five new cases of smallpox developed last week in Toronto. Eleven patients are now in the smallpox hospital.

Personal.—Dr. G. Forrest Weatherhead, assistant physician of the Protestant Hospital for the Insane at Verun, Quebec, has been given a medal by the Montreal branch of the Royal Canadian Humane Association, for heroism in life-saving.——Dr. A. J. Richer, Montreal, delivered a public lecture in Quebec, November 6, on the new outdoor treatment of tuberculosis.——Mr. Z. A. Lash, K.C., Toronto, has contributed $10,000 to the proposed new Toronto General Hospital. The total now subscribed is $969,000.——Dr. H. R. Duff, Kingston, Ont., has been appointed vice-chairman of the Kingston General Hospital.——Dr. C. J. Fagan, provincial medical officer of British Columbia, has returned to Victoria from a trip east.

Hospital News.—During October there were 10 patients in the Swiss Cottage Hospital, Toronto, with smallpox. Four were discharged cured during the month, and 6 remained at the end of the month.——About $15,000 has been subscribed in Hamilton, Ont., for the purpose of a consumption sanitarium for that city.——A by-law will be submitted to the citizens of Winnipeg to raise $150,000 to aid in additions to the Winnipeg General Hospital.——The Toronto Nursing-at-Home Mission has cared for 327 patients since the first of June. The seven nurses connected with this institution made 2,578 visits to these patients.——A new hospital, Miserlorde Hospital—will soon be completed at Edmonton, Alberta. The edifice will be four stories high and will cover an area of 100x50 feet.——St. Paul's Hospital, Montreal, the new contagious diseases hospital in connection with Notre Dame Hospital, was consecrated by Archbishop Bruchesi on October 29.——A conference is to be held between the board of trustees of Toronto General Hospital, the Ontario government and the representatives from the University of Toronto, at a nearby date. The present board of trustees, which consists of five, three appointed by the government, one by the subscribers and one—the mayor—by Toronto, will hand in their resignations. It is likely that a larger board will be appointed to administer the affairs of the new hospital which will shortly be erected.——A new staff has been organized recently in connection with St. Boniface Hospital, Winnipeg. A meeting was held October 19, when Hon. Dr. O'Donnell was elected president and Dr. J. McKenty, secretary. The staff consists of the following members: Consulting physicians, Drs. O'Donnell, J. R. Jones and William Rogers; consulting surgeons, Drs. England, McArthur, R. McKenzie; attending physicians, Drs. Lambert, Nicholas, McKenzie, Peatman; attending surgeons, Drs. Todd, McKenty, Lehman; attending physicians, children's ward, Drs. Davidson, Dubue, Slater; infectious diseases, Drs. Devine, Hal-

penny, Teney, Gardner, Howden; oculist, Dr. Good; pathologists, Drs. Bell, McLean and Turnbull. Heretofore this hospital has been an open institution.——The late Senator Fulford of Brockville, Ont., left $25,000 to the Brockville General Hospital.——The Dominion government will erect a new detention hospital at Quebec with accommodation for 300 to 400

FOREIGN.

Closure of Russian Universities.—The *St. Petersb. med. Wochft.* states that all the Russian universities are closed.

Plague at Zanzibar.—Bubonic plague is reported to be present in Zanzibar, but steamship lines are said to be taking both passengers and freight.

Bubonic Plague in China.—The United States consuls at Antung and at Niuchwang report that plague has appeared at these places and that there has been one death from the disease at Niuchwang.

Variola in Chili.—It is reported from Valparaiso that since the beginning of the recrudescence of variola in that city in January, 1905, 11,000 people have been stricken with the disease and over 5,000 deaths have occurred.

Cholera in Europe.—Scattered cases of cholera are reported here and there in Russia close to the western border. The mortality was 1 to 3 in the epidemic in Germany, while in Russia it seems to be 2 to 3.

Australasian Association for the Advancement of Science.—The next session of this association was to have been held in Adelaide in September, 1906, but it has been postponed till January, 1907, as September is not a convenient date for many of the members who are engaged in educational work.

Typhus Fever in Glasgow.—An outbreak of typhus occurred in a house intended to accommodate 4 or 5 individuals, but in which 9 persons were living. The health officer of the city calls attention to this case and urges the necessity of dealing severely with cases of overcrowding, as they are a menace to the health of the community.

Fee for Consultation by Telephone.—The Prussian medical chambers (Aerztekammer) have been discussing the question of the fee to charge when a physician is consulted over the telephone. The medical chamber in Pomerania has announced that the fee is the same for medical advice given over the telephone as when the patient comes to the physician's office. The other organizations will probably adopt the same rule.

Organization of the Profession in Germany.—We learn that the *Leipziger Verband*, to protect the economic interests of the members of the profession in Germany, now numbers 17,000. Great efforts are being made to enlist the recent graduates in the society as valuable material for the future. For this purpose an employment, exchange and information bureau has been opened at the central office, which is accomplishing good work.

A Medical Library for India.—A movement is said to be on foot among the officers of the Indian Medical Service to establish at a convenient center a circulating medical library. At present there is no such library in India which is of any practical use to medical men. At the medical colleges in the larger cities there are reference libraries, but these are not available to men throughout the empire. A model for such a library is that at Manila, for the use of United States employés in the Philippines.

Prizes Offered by the Mexican National Academy of Medicine.—Two prizes of $500 each are offered by the Academia Nacional de Medicina and published in its organ, the *Gaceta Medica de Mexico* for August 1. The subjects appointed are: "Early Diagnosis of Tuberculosis and Means to Prevent Its Spread" and "Study of Leprosy in Mexico." Articles must be written in Spanish and be received by the academy before Oct. 1, 1906. Address: Apartado postal num. 517, Mexico. The competing essays must be accompanied by the name of the author in a sealed envelope.

Pure Food Bill in Victoria.—The pure food bill, recently introduced into the Victorian parliament, says the *Australasian Medical Gazette*, provides that no person shall sell beer which contains more than a hundredth part of a grain of arsenic per imperial gallon, or that contains any lead, copper, strychnin, cocculus indicus, picric acid, or any substance which is not a normal and proper constituent of beer or a necessary ingredient in its manufacture. In future it will be an offence to make or sell toys colored with varnish that contains arsenic or any other substance in a quantity exceeding that prescribed by regulation.

Cholera in India.—It is reported that the outbreak of cholera, which has been raging in Madras since last July, has at last shown signs of abating. The average death rate from cholera during August was over 50 a day, but the returns for September showed about 30 a day. The cause of the epidemic has been traced to the emigration depot in the north of the "Black Town." It was adjacent to this depot that an outbreak of plague occurred last year and that it was only by prompt and very energetic measures that the danger of the outbreak spreading to the whole city was averted. Naturally there has been an outcry for the removal of the depots beyond corporation limits.

Evening Surgical Demonstrations.—Professor Hochenegg of Vienna has inaugurated a series of weekly surgical evenings, free to physicians, when he will demonstrate various common operations. The first of these "evenings" attracted a crowded audience and aroused great interest. A lively discussion followed the presentation of two patients who had been treated by resection of a tuberculous ankle with Mosetig iodoform filling of the cavity. Certain physicians expressed fear of iodoform intoxication from the procedure and others of the dissemination of germs, claiming that the faultless healing of the wound does not necessarily imply that local and general recurrence is out of the question.

Importance of a Third Person at Consultations.—A dentist in Berlin was recently sentenced to three years in the penitentiary on account of the unsupported testimony of a young woman patient who had a slight fainting spell while he was attending to her teeth. She became pregnant and claimed that he must have committed a criminal assault on her during her unconsciousness. She testified that his clothing was disarranged when she regained consciousness. A correspondent writing from Berlin states that physicians there are becoming very scrupulous in regard to the presence of a third party in all their consultations, especially with young girls and even with men, as the frequency of homosexual practices has warned them to be on the alert.

The Medical Building at Brussels.—The official inauguration of the "Maison des Médecins," on the Grand' Place, in the heart of Brussels, occurred November 19. A number of prominent officials were present, as well as delegates from all the medical and scientific societies of the district. The building contains a large assembly hall and numerous lecture and committee rooms, with a well-equipped library of periodical literature. A number of medical and scientific societies have already engaged quarters for their meetings, and glass show cases have been installed and space on the walls rented for advertising purposes. The second floor has been set apart for a permanent exposition of everything connected with the installment of hospitals, operating rooms, disinfection apparatus, etc. The basement is given up to a restaurant.

Australian Health Society.—The annual meeting of the Australian Health Society was held on September 30 at Melbourne. The governor, Sir Reginald Talbot, presided. The annual report stated that during the year arrangements had been carried out for the amalgamation of the society with the Association for the Prevention and Cure of Tuberculosis. This association has been instrumental in arousing public attention to the need of concerted action for the prevention of consumption, and it is believed that the union of the two societies will further the spread of hygienic knowledge and promote the cause of sanitary progress. The annual examination of public school pupils in the subjects of health and temperance, conducted by the council with the co-operation of the education department, formed an important branch of the society's work.

Carnegie College of Hygiene.—The Carnegie College of Hygiene at Dunfermline was formally opened October 4. The course of study is very comprehensive. The college year is divided into three terms of twelve weeks each, and the work is divided into two sections—theoretical and practical—which, in turn, are subdivided. The theoretical includes human anatomy and physiology, personal and school hygiene, theory of movements and teaching, symptomatology in connection with remedial gymnastics and school hygiene, and voice production. The practical course includes (1) educational gymnastics—Ling's Swedish system, (2) remedial gymnastics and massage, students being allowed, under medical supervision, to treat cases; (3) methods of class teaching, students having charge, under supervision, of classes of all ages in the public schools and in the gymnasium; (4) games, dancing, and swimming.

Tuberculous Immigrants in New Zealand.—Dr. Mason, chief health officer of New Zealand, calls attention to the fact that of 190 patients with pulmonary tuberculosis treated at the Cambridge Sanatorium, 16 were stated to have come from other countries, and that most of them were unable to pay anything toward the cost of their maintenance. He is reported as saying that shipping companies are the natural enemies of

the health department, and that the natural desire of the shipper to escape quarantine delays is the cause in nearly every instance of infectious diseases being introduced into a hitherto clean country. He maintains that if a strict examination were made at the port of departure of all persons proceeding to New Zealand to take up their residence, there would be no grounds of complaint against the health department on the score of their methods of dealing with consumptive immigrants.

Celebration of the Tercentenary of a British Physician: Sir Thomas Browne.—A portrait statue of Sir Thomas Browne was unveiled at Norwich with great ceremony on the three hundredth anniversary of his birth, October 19. Although he did not contribute anything to the science of medicine, yet his great works, "Religio Medici," "Christian Morals," "Vulgar Errors" and "Urn Burial," and the beauty of his character and public spirit have immortalized his name. Professors W. Osler and Clifford Allbutt were delegates to the celebration from Oxford, and Osler stated in the course of his address that he had visited Norwich thirty-three years ago as a pilgrim to the place hallowed by the memory of Sir Thomas Browne. He remarked further that there are three lessons to be learned from his life, all of value to the profession today: "First, we see in him a man who had an ideal education. He was thoroughly versed in the classics, and lived abroad for two years, thereby becoming a citizen of the whole world. The second important lesson from his life is that he presents a remarkable example in the medical profession of a man who mingled the waters of science with the oil of faith. The third lesson is that the perfect life may be led in a very simple, quiet way. Norwich was a small town in his day." The one blot on his memory was that he believed in witchcraft, and testified in the last trial of witches in England, the women being condemned.

Cholera in Europe.—Germany is dealing successfully with cholera as it is brought over the Russian border, but the outlook in Russia is very discouraging, as scattered cases are reported from a number of points along the frontiers and elsewhere. The congress of medical men summoned to Moscow last spring to discuss measures to protect the empire against invasion by cholera passed resolutions urging radical changes in the taxation, etc., which grind down the people, keeping them at the point of starvation and thus rendering them unable to cope with disease. The congress further went on record with the statements that the prevailing unrest was so great that attempts to arrest the spread of cholera would be likely to meet with opposition on the part of the peasants, and prove dangerous to life and limb of those engaged in prosecuting sanitary measures. Also that the return of troops from the seat of war is liable to spread disease, and if there should happen to be a grain shortage the outlook would be very threatening. The congress officially voted in favor of a national representative assembly which could deal with these and allied questions. The congress was denounced by the authorities as revolutionary, we remember, and its transactions were suppressed, but the czar has done what the congress demanded in regard to summoning a national assembly. The problems before it, however, take time to solve, and the danger from cholera is pressing.

Sanitary Regulation of Costumes, Libraries, Pawnbrokers, Etc.—The authorities in Bohemia have recently decreed that the clothing and bed linen of persons who have recovered or died from infectious diseases should be disinfected, and also the clothing and linen of persons who have been in contact with the convalescent or the deceased. Masks for the face are not allowed to be rented, and wigs must be revarnished inside before they can be rented to another party. All garments which come in contact with the body must be washed clean before they can be rented out again. Books and pieces of music in circulating libraries need not be disinfected before being given out, as no effectual means of disinfecting them has yet been found practicable. But a warning should be pasted in each book or piece of music cautioning against turning the pages with the moistened finger, and also suggesting the advisability of putting a paper cover on the book or piece of music before handling it. The warning notice should further request the holder of the book to notify the proprietor of the circulating library in case there is infectious disease at his house. In case of notice of infectious disease the proprietor should withdraw the books or music from circulation until after formaldehyd disinfection. The proprietors of large theaters are required to disinfect the costumes, especially all garments coming in contact with the body, used by the stock company. Pawnbrokers' establishments must be equipped with their own disinfecting plants.

Eighth French Congress of Internal Medicine.—The main addresses at this congress, which was held at Liège in September, were on "The Clinical Forms of Chronic Rheumatism," "Avoidance of Salt in the Diet in Nephritis," and "Secretions of the Pancreas." Widal outlined the treatment of nephritis by "dechloridation" as requiring first the removal from the organism of the salt and the edema encumbering it; when this has been accomplished, then allowing in the diet only enough salt to correspond to the degree of permeability of the patient's kidneys for the salt. At first all salt should be forbidden, but when the organism has once been freed from the excess of salt and fluid, then increasing amounts of salt should be permitted, always keeping below the strict tolerance of the patient. The "dechloridation" may be aided by diuretics; theobromin and its compounds are the most effectual dechloridizers. An ordinary diet with 2,000 calories contains about 1.5 gm. of salt. Comparative dosage of the salt ingested and eliminated will reveal at once the degree of permeability of the kidneys. Beco's experience has been that the use of diuretics to supplement abstention from salt is equally effectual whether the effusion is of renal or cardiac origin. His experimental research has demonstrated that certain diuretics act on the wall of the renal vessels, dilating them and thus augmenting the circulation through the kidney. Dechloridation treatment is one of the rare examples of a therapeutic progress logically deduced from progress in theorizing. The *Presse Médicale*, Nos. 78 and 82, contains the full text of the reports.

Ninth French Congress of Urology.—The French congress of urology always follows the congress of surgery at Paris, and this year it met October 5-7. Tumors of the bladder, prostatectomy and functional diagnosis of kidney disturbances were the main subjects treated. Rafin declared in regard to tumors of the bladder that surgical intervention for their removal should be within narrow limits. It is a trivial operation and the remote results are extremely satisfactory when the tumor is pedunculated or can be pedunculated, but when the tumor is infiltrated the immediate results of attempts to remove it are extremely grave and the outlook is serious. In 96 cases of partial cystectomy for epithelial cancer, there were 21 deaths at once, and in 25 cases the outcome is not known. In the remaining 50 cases, 5 of the patients were alive after three to six years, but 30 succumbed to recurrence and in 16 the outcome is not known. Total cystectomy has been done 30 times, with 17 operative deaths. Pawlek's patient is the only one still surviving. Haggo's patient lived for five and a half years. The operative mortality from sarcoma has been 43.6 per cent. and rapid recurrence is the rule. The operative mortality for myoma has been 28.5 per cent. and recurrence is liable. Weinrich stated that Nitze had removed 101 papillomata by his intravesical technic, and 72 cases have been followed to date without a recurrence. There has been recurrence in 18 cases; the others have been lost to sight. Cathelin exhibited some new instruments to facilitate his technic of perineo-suprapubic prostatectomy. Several speakers urged that the fact of there being only one kidney should not deter from surgical intervention. One reported a case of severe hematuria with a single kidney cured by decapsulation. Another cured a patient in uremic coma by decapsulation of the remaining kidney after removal of the other kidney two years before on account of tuberculosis. One speaker reported clinical cures even in advanced stages of tuberculosis of the kidneys. In 3 such cases the nephrectomy was followed by the entire subsidence of all the lesions in the bladder and prostate.

French Congress of Surgery.—The eighteenth congress met at Paris during the first week in October, immediately after the first International Congress of Surgery. The subjects appointed for discussion were "Surgery of the Pancreas," "Reparative Surgery of the Face," and "Conservation in Treatment of Traumatisms of the Limbs." Nimier delivered the address on the last subject, emphasizing the fact that the modern surgeon should not only aim to preserve the injured parts by correcting the primitive lesions, applying the necessary bloodless measures, but he should also strive to restore function to the parts, with surgical intervention if necessary for this purpose from the very first, as soon as the diagnosis and the indications are established. Repair of the traumatic lesions is easily done, but functional repair requires persevering massage, mechanotherapy, hydrotherapy and electrotherapy. Massage has taken in surgery the place it deserves, but the other physical measures are still in a somewhat rudimentary condition. Hospitals should be better equipped for functional cures of traumatic lesions than is the case at present. Doyen reported the successful suture of a severed axillary vein. He used very fine, round needles, suturing at separate points, and fastening the stumps to the surrounding parts to prevent any traction on the suture. In case of complete destruction of the

axillary vein, he suggested that the external jugular might be transplanted on the stump of the shoulder, anastomosing it with the cephalic vein. To facilitate the suture of a vein, he advises suction cleansing of the field with an aseptic tube connected with a suction pump. This aspirates every particle of blood, etc. Calot described a new method of treating congenital dislocation of the hip joint. He makes a very small incision, less than 2 cm. long, and introduces through this a special dilating instrument, with which, instead of cutting the stricture in the capsule, he stretches it. When the capsule is thus stretched, the dislocation can be easily reduced, as he has accomplished in two cases with excellent results. The discussion of surgery of the pancreas showed once more the difficulty of differentiating lesions in this organ. Garré said that he was able to save only 2 out of 11 patients with acute purulent inflammation or infarcts in the pancreas.

Crusade Against Tuberculosis in the Argentine Republic.—Among the measures adopted by the Antituberculosis League of Argentina is the publication and distribution of 200,000 copies of a "catechism" with questions about tuberculosis, and the same number of copies of a circular with directions for its cure and prevention. These circulars are distributed to children in the schools and to the audiences at public gatherings and at religious services. Two large wall tablets have also been issued, which are hung up in factories, public halls, schools, etc. One gives the proportions of the mortality from various diseases in the sixteen largest cities of the country, the proportions being shown in colored sections of circles. In Corrientes the mortality from tuberculosis is considerably more than half the total mortality, and in all it has the "lion's share," except in the two hotbeds of malaria. The second placard has in display type "the Disease," "Contagion," and "Curability." The second column, "Contagion," gives illustrations of the bacilli, the diseased lung tissue, and of pocket and standard cuspidors. Under the heading of "Curability" are included the means of getting cured by life in the open air, plenty of light and air, food and rest. A list of the tuberculosis sanatoriums and dispensaries, existing or projected, is appended, the list concluding as follows: "Sanatoriums for children, none; country homes for convalescents, none; seaside sanatoriums for children, one, the Hospicio at Mar del Plata; capacity, 125 children." Another measure which has served to popularize the ideas in regard to prevention and cure of tuberculosis has been the printing of antituberculosis maxims on all the boxes of matches issued by the principal company. As 10,000,000 to 12,000,000 boxes are sold each month, this is regarded as a great aid in the propaganda. The isolation of the tuberculous is now accomplished in the public hospital at Buenos Ayres, as the curable applicants are sent to the public sanatorium and the incurable to the Muniz Hospital. The other hospitals have solved the problem of isolation by refusing tuberculous applicants altogether. An illustration of the placards is given in the last *Semana Medica*, with the address on the subject presented by E. R. Coni at the recent International Tuberculosis Congress.

LONDON LETTER.

The New Cancer Research Laboratories at the Middlesex Hospital.

Cancer research at the Middlesex Hospital may be said to have gone on for more than 150 years. Records of cases have been accumulated since 1747 and are now being investigated. The new cancer research laboratories have the advantage of receiving material from two different classes of cases—those seen in general hospitals and susceptible of amelioration by operation, and those seen in the infirmaries and progressing to a fatal end. The laboratories were opened in 1900, at the same time as the present cancer wing, which contains forty-nine beds for incurable cases. The first director of research was Dr. A. Foulerton and the present one is Dr. Lazarus-Barlow. Under the latter the facilities have been greatly extended. In 1900 the director had three assistants; now he has eight, including four trained paid assistants, two holders of research scholarships and two voluntary workers who are training for research. Each worker has a separate laboratory and there is still room for others. The laboratories are fitted with all the most recent apparatus for histologic, bacteriologic and biochemical work. There are also a workroom, where apparatus are constructed, altered or repaired; a preparation room, where the tissues, organs, etc., are hardened, embedded and cut; a library containing the most recent monographs on malignant disease and current periodical literature on the subject, and cold-storage rooms in the basement which are used for specimens. The specimens and material in all its forms are so well classified and catalogued that any case from the year 1747 onward may be investigated at short notice. Every member of the department undertakes at one time at least two pieces of work—one statistical, based on the accumulated data of years, and the other a piece of research. Annual reports are issued comprising not only the description of the researches, but also the pathologic findings in some 300 fresh cases of malignant disease.

Sir Frederick Treves on the Army Medical Service.

At a largely attended meeting of the Brighton and Sussex Medico-Chirurgical Society, Sir Frederick Treves delivered an address on the army medical service. He pointed out that the so-called hospital scandals of the Boer war five years ago led to an extremely violent attack on the army medical service, which was undeserved by a body of men who were endeavoring to make bricks without straw. Since that time the medical service has been reorganized, according to the advice of a commission of experts appointed by the government. The chief change made in the status of the army surgeon is that his promotion now depends on merit and not on seniority. He is sent to the Army Medical College for study before he advances any step. Any man who does unusually well at the examinations gets accelerated promotion. It is now possible for the army surgeon to qualify as a specialist and the number who have done is is extraordinary. When so employed special pay is given. The result is that the army is attracting the best men in the profession. The present field equipment, Sir Frederick thinks, is the best in the world. It leaves little to be desired; it is light, compact and elastic. The general result is that the army medical service is second to none in the world, possessing a corps of highly competent and most efficient medical officers, an up-to-date equipment, and a most carefully elaborated organization; but there are anomalies in the war office—the army medical department is under the control of an adjutant-general who is not a physician. In the Boer war the admissions to hospital were 748 per 1,000 for disease and only 34 for wounds. This meant that the great bulk of casualties were due to preventable disease. But the army doctor had practically no power in that direction. The casualties at the battle of Colenso were nothing to those caused by the men drinking the contaminated water of the Modder River when peacably crossing it on a perfectly calm day. The army surgeon should have a much freer hand than he has at present. Sir Frederick concluded by pointing out what appeared to him to be needed to make the army medical service as perfect as possible: 1, The director general should be the head of his department and be responsible for its efficiency and economical administration; 2, he should have direct access to the army council and to the secretary of state; 3, he should have control of the money voted for the medical service; 4, the service should remain as at present, under the supervision of the advisory board; 5, an efficient army medical reserve should be formed; 6, the combatant officer should have some knowledge of hygiene as applied to campaigning and barrack life, and a like knowledge of a still more elementary character should be possessed by the private soldier; 7, the army medical officer should be vested with such authority and provided with such personnel as would enable him to carry out those sanitary arrangements in the field which experience had proved to be essential to secure the minimum loss of life from disease.

The Evil of Street Noises: Town Clock Nuisance Abolished in Birmingham.

The unnecessary evil of some city noises is well illustrated by a letter written by a man who underwent an abdominal operation in Birmingham. He wrote to the lord mayor, asking him if the quarter-hours of the town clock could not be stopped every day from 10 p. m. to 8 a. m., and the hours muffled to half-tones, as the ear-splitting stridency of the notes greatly disturbed him during the night. The lord mayor declined to interfere on "the grounds that the clock is a public one and its consistent working is of the first importance to the inhabitants of the city." The *Lancet* discussed the question and thought that both from a humanitarian and a business standpoint the decision was wrong. A clock which clangs noisily at quarter-hour intervals throughout the night must be a serious drawback to the recovery of the sick within hearing of its sounds. Nor is the loud chiming of a clock by day and night necessary for business. Much of the din which prevails in large towns by day and by night is avoidable. This protest by the *Lancet* has been followed by the decision of the city council of Birmingham to adjust the automatic apparatus of the town clock so as to cut off the chiming mechanism between 7:30 p. m. and 8 a. m.

Professor Osler at Guy's Hospital.

A very enthusiastic welcome was given Professor Osler at Guy's Hospital, where he delivered an address to the Pupils' Physical Society on "The Life and Work of Sir Thomas Browne." He was welcomed by the venerable president of the society, Sir Samuel Wilks, and the members of the staff of the hospital. In commencing his address Professor Osler claimed from the audience the "customary indulgence which is always extended to the bibliomaniac." He said that he had long studied the works of Sir Thomas Browne and in proof of this he pointed to a large table in front of him covered with editions of that author's works in Latin, German, Dutch and French. Among these was a copy of "Urne Burial," which was stated to have belonged to one of the sons of Sir Thomas Browne. Of the "Religio Medici" Professor Osler said with some slight emphasis that it was given to the world by Browne before he was 30, and quoted the author's contention that the magnetic force of a man began to fall after that age. This, Professor Osler said, was a sufficiently serious reflection for certain advanced thinkers who at the present day considered that a man was fit to work up to 40. He was proceeding to say what would happen to a man after 40 when he was interrupted by loud cheers and laughter. He treated with sarcasm the statement attributed to him by the Canadian press that men past work should be anesthetized out of existence, and whenever he alluded to this topic he drew sympathetic cheers from his audience. The address was illustrated by lantern slides thrown on a screen. Great appreciation was evinced by the students when it was announced that Professor Osler had presented a complete edition of the works of Sir Thomas Browne to their society. The chairman, Dr. Frederick Taylor, in proposing a vote of thanks to Professor Osler, said that to all intents and purposes he was an Englishman and commented on the charm with which he had communicated the fruits of his own recreation, bibliography. In replying Dr. Osler spoke of the veneration he had always entertained for Guy's men and of the great debt he owed to his "revered teacher," Sir Samuel Wilks.

Increase of Lunacy in London.

The number of pauper lunatics in asylums, licensed houses, workhouses, and with relatives and friends, on Jan. 1, 1905, was 24,682, an increase of 704 on the figures for the corresponding date of 1904. The increase on the latter date on the number for 1903 was 996—the highest on record. The superintendents of the different asylums, in their reports, assign various causes for the amount of insanity which exists. Intemperance, worry and heredity are specified by the superintendent of the Banstead asylum. The medical superintendent of the Claybury asylum finds that alcohol is the exciting or predisposing cause of insanity in 33 per cent. of the males admitted, and in 18 per cent. of the females. At Colney Hatch hereditary influences were found in 23 per cent. of the cases and congenital defects in 7 per cent. In Hanwell 24 per cent. of the admissions were due to alcohol and 48 per cent. to heredity. Possibly the increase of insanity shown by the figures is more apparent than real, for there has been an increasing tendency of recent years to certify for asylum treatment cases of senile decay. The recoveries for the year 1904 show the following percentages: On the total admissions, 33.5; on the average number of patients resident, 7.8; on the total number under treatment, 6.25.

The Study of Tropical Medicine.

The winter session at the London School of Tropical Medicine was inaugurated by an address on "Scientific Research in Medicine," by Professor Nuttall. Since its opening, in October, 1899, the school has received 554 students, including 40 women graduates. For the present session 39 students have entered, the largest number on record. Professor Nuttall traced the great development of tropical medicine in recent years for which Lancar, Myers, Durron and Plehn and others had laid down their lives. He pointed out that medical research requires endowment and said that it is a grievous thing that in this country, where so much is done for charity, so pitiably little is done for the advancement of learning. The wealthy classes in this country ought, he thought, to imitate their brethren in America. In many institutions one man is expected to perform duties which in more enlightened Germany are allotted to two, three or more teachers, each provided with a living wage. Most teachers of science in Great Britain receive pittances of which few are sufficient and many totally inadequate.

Pharmacology

REPORT ON NOSTRUMS IN GERMANY.

Translated by Dr. Henry Leffmann, Philadelphia.

In a recent issue of the proceedings of the Dresden scientific society, "Isis," Dr. A. Beythein, director of the Dresden municipal laboratory, gives the results of examinations of some secret remedies sold in that neighborhood. The data are of value, because they are from trustworthy sources, and interesting as throwing light on the conditions in Germany. Some of the remedies are for domestic animals, but it seems not amiss to include these. As a positive identification, the German title is given with a free translation.

Einreibungsmittel fuer Staerken der Hautnerven.[1] Inunction for strengthening the cutaneous nerves. The advertisement stated that the preparation contained Iceland moss. None was found. The following ingredients were found in 100 c.c.: Alcohol, 22.24 grams; ammonia, 1.10 grams; fixed solids containing a carbonate, 1.55 grams. It was a solution of ammonia in dilute alcohol, with a little potassium carbonate and opodeldoc.

Special-Ambrosia. Special Ambrosia. This a greenish-yellow salve sold by a quack for aiding parturition. The price is 3.75 marks for a package weighing 125 grams (about $1.00 for 4 ounces). It was found to consist of lard, flavored with carroway oil.

Wurmkrautpulver. Wormwort powder. This was found to be composed of powdered tansy flowers.

Dr. Tschernich's Universal-Lungenkraut. Dr. Tschernich's Universal Lungwort. This was found to be a powder of the entire plant of *Galeopsis ochroleuca* (a member of the Labiatæ).

Brandwunden-Crême. Emulsion for Burns. This contained starch, glycerin, mineral oil, a plant-extract of undetermined source and a red coloring matter.

Salbe gegen Syphilis. Antisyphilitic Salve. This contained tallow, lard and beeswax.

Coca-pulver. Coca Powder. Coca is possibly a proprietary name. The preparation is extensively advertised as a remedy for the drink habit. It was found to contain baking soda, a small amount of some umbelliferous fruit and calamus.

Rippsche Heilsalbe. Ripp's healing salve. This was recommended for many skin diseases. It was found to contain turpentine, egg yolk, paraffin, beeswax, aluminum acetate, balsam of Peru, boric acid, salicylic acid, and an undetermined perfuming material.

Mittel gegen Fussschweiss. Remedy for sweating feet. This was found to be a 12 per cent. solution of formaldehyd.

Hygienische Brillantine Helioss. This is the high-sounding title of a hair dye containing an ammoniacal solution of silver nitrate.

Bickmore's Wundbur fuer Pferde und Vieh. Bickmore's Gall Cure. This was found to be a mixture of vaselin, boric acid and alum, colored with ultramarine blue.

Heuschkel's Kolkodin. Kolkodin is probably a proprietary name. It is advertised as a cure for colic in horses. It is sold in two parts: one a white powder, the other a brownish liquid. The powder is a mixture of white arsenic (60 per cent.) and white sugar (40 per cent.). The liquid was a carminative tincture. (No dosage is mentioned in the report, but it is probable that the white powder is directed to be given in very small doses, a practice followed by some stablemen.)

Makrobion. This is a proprietary name of obvious derivation. It is sold as a promoter of longevity. It was found to contain common salt, diatomaceous earth, baking soda, Glauber's salt, and sodium phosphate.

Creating a Nostrum.

Advertisement is an inseparable part of the nostrum business. The demand for a nostrum is created by the shrewdly prepared and widely published declarations of the wily promoter. This is true whether one refers to the nostrum exploited to the laity or to the one which is so-called "strictly

1. The original text reads "Hauptnerven" (chief or head nerves), but I think this is a misprint for "Hautnerven" and have so translated.

ethical," "for physicians' use only," or to the remedy which tries to exploit both the profession and the public. A piquant and spicy series of articles is now running in *Printers' Ink*, entitled "Forty Years an Advertising Agent," by Mr. George P. Rowell. At one time he did business with an advertiser in Halifax, N. S., who sold a medicine known as "Fellows' Hypophosphites." The success of this remedy was such that some shrewd business men bought the trademark, incorporated a company, retained the original owner as manager, stopped all advertising except in medical journals, and thereafter pushed the sale only among the medical profession. Mr. Rowell relates how the stock increased in value, and our readers are, of course, aware of the quantities of this preparation which are now sold because of the systematic pushing of the remedy through the medical press. Mr. Rowell goes on to relate how he began to realize the value of a trademark, and how much money there might be in the shrewd launching of a simple remedy for common ailments when well advertised and marketed under an attractive trademark name. Accordingly he sought some preparation of this kind and even advertised for a trademark which he might buy for this purpose. He received offers of remedies for moths, for ague, for spavin, etc., but none of them seemed to be what he wanted. He nearly bought Dr. Lyon's rights in his tooth preparations, but, at the last moment, Dr. Lyon begged off and the deal was not closed. While still searching for something which he could thus exploit, a medical student asked him why he did not use the rhubarb and soda compound which was a stock prescription at a certain hospital in New York City where the student was an interne. This, however, was a liquid, which made it unsuitable for the purpose. It was not for some time that Mr. Rowell learned from the student that it could be made in the form of tablets. He was much delighted to hear of this and felt that he had found the remedy which he wanted. Taking an attractive name was, of course, necessary for the preparation. It seems that the prescription contained rhubarb, ipecac, peppermint, aloes, nux vomica and strychnin. By taking the initial letters of these ingredients the name "Ripans" was made. This preparation was put on the market and vigorously pushed. The packages were gotten up in a convenient and attractive way for sale by the druggist. Mr. Rowell relates the careful way in which all details of advertisement and sale were worked out. His narrative may be taken as an illustration of the method by which many nostrums are originated. Some article which may be of more or less benefit when indicated is exploited as a cure-all, and by means of a catching name, meets a ready sale through the willingness of the public to accept the medical advice of one of whom they know nothing. In other words, if the shrewd promoter will provide the humbug and press the magic button of publicity, the people will do the rest.

Alcohol Percentage in Patent Medicine.

Among the many articles that are appearing in the newspapers, and which evidently emanate from the Press Bureau of the Proprietary Association, is an article bearing the superscription, "Alcoholic Percentage of the Tincture and Drug Compounds of the Dispensary of the U. S. Pharmacopeia." It appears as a double column table, and purports to show that the preparations of the Pharmacopeia contain as much alcohol, or more, than do patent medicines. Here are some of the shining examples:

	Alcohol, per cent.	Dose.
Tincture aloes and myrrh	70.5	½ teaspoonful.
Tincture asafetida	84	30 drops—1 teasp'ful.
Tincture nutmall	84.6	1 to 3 teaspoonfuls.
Tincture jalap	62.6	1 to 2 teaspoonfuls.
Tincture gualac	84	1 to 3 teaspoonfuls.
Tincture myrrh	84	15 to 30 drops.
Tincture squill	70.5	10 to 40 drops.
Tincture sanguinaria	56.4	30 to 60 drops.
Tincture podeophyllum	84.6	5 to 15 drops.
Tincture quassia	37.9	1 teaspoonful.

Admitting that doses given are correct, what is the inference? That any of these tinctures might be given in doses of half-wineglassful, which is the average of the ordinary patent medicine bitters of the peruna or Hostetter type?

A tippler may tickle his palate with any alcoholic liquor from Peoria "rot-gut," Kansas "boot-jack," "Jersey lightning" or "Mexican pulque," but how long would his gustatory nerves appreciate the tincture of asafetida or of guaiac, or his digestive system recuperate under the tincture of jalap, of podophyllum or of blood root?

To show the care taken in compiling the list, the following examples are taken at random:

Ammoniated tincture of ergot ale	56.4	per cent.
Tincture ferric chlorid	94	per cent.
Camphorated tincture of opium	90.24	per cent.
Tincture serpentaria	61.1	per cent.
Tincture serpentaria rhizome	84.6	per cent.
Tincture sumbul	61.1	per cent.
Tincture sumbul root	84.6	per cent.

The alcoholic percentage in tincture ferric chlorid and camphorated tincture of opium is given as nearly double what it really is. Note also the distinction in serpentaria and its rhizome and sumbul and its root and the great difference in the alcoholic strength of the respective tinctures. The fact that the rhizome and root, respectively, constitute the drugs proves that the alcohol percentages accredited the two tinctures for each of the two drugs are purely fictitious and suggests that the whole exhibit is faked up from some old family medicine or receipt book. Most of the alleged preparations are of British origin not used in this country. The entire production is of a most illiterate character and suggests that the Proprietary Association Press Bureau has been victimized by some one.

The Abolition of Secret Remedies.

When the American Medical Association undertook its proper duty of enlightening physicians as to the true composition of proprietary medicines, the step was hailed with delight by the profession, while, of course, there arose mutterings of anger from the camp of the unscrupulous manufacturers. Gradually the opposition is getting out into the light, so that it becomes possible to see who feels pinched by this great forward movement of the organized medical profession. Pharmaceutical manufacturers who have nothing to conceal welcome the advent of the Council on Pharmacy and Chemistry; but, unfortunately, in the last few years manufacturing and even retail pharmacy has become permeated with a spirit of deceit. For this state of affairs the ready gullibility of many thoughtless physicians is much to blame. To give the profession the actual facts is the task allotted to the Council on Pharmacy and Chemistry. Already physicians have been informed in regard to the acetanilid compounds, and seldom has a more important piece of work been laid before the profession. It is interesting to note that few, indeed, of the medical journals have mentioned the report of the Council on Pharmacy and Chemistry on the acetanilid compounds, though it appeared in THE JOURNAL of the American Medical Association over three months ago. This state of affairs is deplorable, but it is drawing to its close. Through its own state journals and through THE JOURNAL of the A. M. A., the profession now has control of its means of publicity. The Council on Pharmacy and Chemistry will ascertain the truth about our drugs, and the profession's press will disseminate the knowledge. One of the greatest reform movements of our time is thus well under way. Every physician will eagerly watch the march of coming events.—*Ohio State Medical Journal.*

War Against Quackery.

According to the *British Medical Journal*, an Austrian society for the repression of quackery will be formally constituted at a meeting to be held in the rooms of the Medical Society of Vienna on November 11. The French Congress for the Prevention of Unqualified Practice of Medicine, which was postponed last year, will be held in Paris from April 30 to May 3, 1906, under the presidency of Professor Brouardel. All communications relative to the congress should be addressed to M. Levassort, 2, Place des Vosges, Paris.

Prohibition of Advertising of Certain Secret Remedies in Germany.

In 1903 the confederated states of Germany formulated a short list of secret medicines, advertisement of which was prohibited. Some manufacturers evaded the law by changing the names of their products. On this account suit was recently brought against two manufacturers, one in Prussia and one in Baden. The Prussian court decided that the prohibition ap-

plied to the advertised name, and, the name having been changed, the article could be advertised without conflicting with the regulations. The Baden court decided the contrary, claiming that the product, not the name, was prohibited, and that it was forbidden to advertise it under any name.

Clergymen and Testimonials.

A very prominent anti-saloon worker, a clergyman, lately said that in shame he was compelled to admit that he had run across indubitable proof that there are ministers of the gospel who receive pecuniary commissions from the makers of alcoholic nostrums whose wares they recommend!—*Journal of the Medical Society of New Jersey.*

Correspondence

Laws Regulating Practice—American Academy of Medicine.

EASTON, PA., Nov. 18, 1905.

To the Editor:—I regret that an error of statement has crept in the otherwise most excellent synopsis of the report on the Laws Regulating the Practice of Medicine, read by the undersigned at the meeting of the American Academy of Medicine, as found in your issue of Nov. 18, p. 1596. The last sentence, reading: "The report favored having osteopaths represented on state medical examining boards," has its foundation in the discussion of the report. The report made no reference to the personality of a board of examiners. Its contention was that the general law should provide a test for all who wish to practice medicine, under this or that vagary, whether osteopathy, psychopathy, or what not, instead of, as at present, permitting special legislation, or special exemption; that this test should be on certain foundation subjects, and a special and limited license be given, which fact must be noted in every public announcement of the licentiate. Who should conduct the examinations was not mentioned. One would rather infer that they were to be under the care of the board of examiners of the state, who should possess a full license to practice medicine, and thus exclude all partially fitted persons.

CHARLES MCINTIRE.

Pathology of Amebiasis—An Acknowledgement.

MANILA, P. I., October, 1905.

To the Editor:—In the hurry of completing our article on the "Pathology of Intestinal Amebiasis," Dr. Musgrave and I omitted to give credit to whom credit was due. A certain number of the cases on which our statistics were based were cases at the First Reserve Hospital, in which Dr. R. P. Strong had done the autopsies either alone or assisted by Dr. Musgrave. The omission of this recognition was entirely unpremeditated, and we wish to express our sincerest apologies. In case the paper has gone to print[1] will you please give our acknowledgement space on another page? PAUL G. WOOLLEY.

Priority in Splenic Blood Research.

OMAHA, Nov. 16, 1905.

To the Editor:—My attention has just been called to an error made in my paper, "Indications for the Removal of the Pathologic Spleen," in THE JOURNAL, Sept. 2, 1905. Through some inadvertence I stated that Arteage preceded Dr. Edward T. Williams (not Williamson), of Boston, in the demonstration of nucleated red blood corpuscles in animal spleens. I find that this was an error and that Dr. Williams deserves priority in this matter, having published articles in *American Medicine*, April 28, 1902, and Nov. 28, 1903, on this subject.

B. B. DAVIS.

1. See JOURNAL A. M. A., Nov. 4, 1905, p. 1371.

A Hint for the Anesthetist.—When it is necessary for the anesthetist to hold the patient's jaw forward, he will obviate much subsequent soreness by exerting the pressure on only one side at a time.—*Medical Standard.*

Marriages

ISAAC LEDERMAN, M.D., to Miss Hallie Streng, both of Louisville, Ky., November 22.

JAMES A. DIBRELL, M.D., to Miss Lula Beal, both of Little Rock, Ark., November 22.

CHARLES FAY AMOS, M.D., to Miss Susie Wanzer of Mesopotamia, Ohio, November 8.

JACOB DANIEL BROOK, M.D., Grandville, Mich., to Miss Mary Vander Velde, September 20.

METHE E. TRACY, M.D., Spickards, Mo., and E. W. EWING, M.D., Modena, Mo., October 25.

JOSEPH H. HINES, M.D., Atlanta, Ga., to Miss Cecelia Lopez of Charleston, S. C., November 15.

MURRAY A. STURM, M.D., New York City, to Miss Flora Rice, at Philadelphia, November 15.

JOSEPH C. ROTH, M.D., Upper Sandusky, Ohio, to Miss Lillian Ley of Tiffin, Ohio, November 22.

FRANK E. CLOUGH, M.D., Alliance, Neb., to Miss Louise Handke of Evanston, Ill., November 14.

CHARLES W. FALL, M.D., Fowler, Ind., to Miss Jeannette Barnhart of Frankfort, Ind., November 1.

ELISHA LEWIS SENCINDIVER, M.D., to Miss Mary Flick Stewart, at Martinsburg, W. Va., November 15.

L. L. BANKSTON, M.D., Tunica, Miss., to Miss Mal Leslie of Alligator, Miss., at Memphis, Tenn., November 8.

HENRY HAROLD BROWN, M.D., Philadelphia, to Miss Antoinette Fay Zimmerman, at Baltimore, November 15.

WILLIAM LEE GANNAWAY, M.D., Greendale, Va., to Miss Willie Belle Pierce, at Roanoke, Va., November 16.

J. PRESTON SENCINDIVER, M.D., to Miss Mollie Blanche Macgill of Catonsville, Md., at Baltimore, November 15.

C. FONTAINE-MAURY LEIDY, M.D., Philadelphia, to Miss Margaret Howard Ridgley of Towson, Md., November 25.

NORMAN ELLIS SARTORIUS, M.D., Tangier, Va., to Miss Ella Frances Schoolfield, at Pocomoke City, Md., November 15.

Deaths

James Montgomery Holloway, M.D. Tulane University Medical Department, New Orleans, 1857, professor of surgery and clinical surgery, Kentucky University Medical Department; surgeon for the Broadway Infirmary and the City Hospital of Louisville; member and president of the Mississippi Valley Medical Association in 1882; member of the Kentucky State Medical Society, died at his home in Louisville, November 13, from interstitial nephritis after a long illness, aged 71. Dr. Holloway began the study of medicine in Mississippi under the preceptorship of Dr. Harwood of Claiborne County. His first hospital appointment was at Touro Infirmary, New Orleans. In 1860 he settled in Madison County, Miss., and practiced there until the outbreak of the Civil War, when he enlisted as a private in the Eighteenth Mississippi Infantry, C. S. A. Soon afterward he was appointed regimental surgeon and was then placed in charge of the hospital service at Richmond until the close of the war. He was in active practice in Louisville continuously from that time until his final illness. He held chairs in several of the medical colleges, the first being that of anatomy in the University of Louisville; later he became professor of physiology and medical jurisprudence in the same institution, and afterward professor of clinical and operative surgery in the Kentucky School of Medicine and in the Louisville Medical College. He was one of the organizers of the Hospital College of Medicine in 1874, resigning his position in the Louisville Medical College at this time. He was professor of surgery in this institution for eight years, resigning again to take up the same work in Louisville Medical College. In 1898 he resigned from both of these college positions, when he became one of the founders of the Kentucky University Medical Department and was made emeritus professor of surgery, a position which he held until his death. In 1885 the degree of M.A. was conferred on him by Center College. In 1902 he served as president of the Association of Surgeons of the Army and Navy of the Confederacy.

Daniel E. Nelson, M.D. Vanderbilt University Medical Department, Nashville, Tenn., 1882, of Chattanooga, Tenn., member and ex-president of the Chattanooga and Hamilton County Medical Society; member and ex-president of the Tennessee

State Medical Association; member of the American Medical Association and member of the House of Delegates of the same; a consistent and faithful attendant at all medical meetings; member of the staff of Erlanger Hospital, died at that institution November 9, two days after a fracture of the base of the skull, the result of a fall from his horse, aged 46. The local medical society, at a special meeting, adopted resolutions of regret, respect and appreciation.

Henry Hobart Maynard, M.D. Rush Medical College, Chicago, 1861, of Los Angeles, Cal.; assistant surgeon of the Eighteenth Iowa Volunteer Infantry, later surgeon of the Second Arkansas Volunteer Cavalry, and then chief surgeon of division during the Civil War; a member of the Medical Society of the State of California and the Los Angeles County Medical Society; superintendent of the Los Angeles County Hospital in 1886 and 1887, and professor of surgery in the College of Medicine of the University of Southern California until 1901, when he was made emeritus professor, died at Pacific Hospital, Los Angeles, November 4, from uremia, after an illness of a month, aged 69.

George Reed Morehouse, M.D. Jefferson Medical College, Philadelphia, 1850; a member of the American Medical Association, Philadelphia Philosophical Society and Philadelphia College of Physicians; a prolific medical writer and collaborator with Dr. S. Weir Mitchell, died at his home in Philadelphia, November 12, from nephritis, after an illness of two days, aged 76. At his funeral the following personal friends acted as pallbearers: Drs. S. Weir Mitchell, William W. Keen, Charles P. Turner, Henry C. Chapman, John H. Musser, J. Chalmers Da Costa, J. Coles Brick, and Perrifor Fraser.

George H. Munsell, M.D. Harvard University Medical School, Boston, 1860, assistant surgeon of the Thirty-fifth Massachusetts Volunteer Infantry in the Civil War; in 1880 representative from the second district of his county; thirty-seven years a school committeeman; twenty-five years medical examiner of Barnstable County; some-time president of the county medical society; vice-president of the Massachusetts Medical Society, etc., died at his daughter's home in Hyannis, Mass., November 2, aged 69.

Alexander Tunstall, M.D. Bellevue Hospital Medical College, New York City, 1868, a veteran of the Civil War, in which he served as adjutant of the Sixth Virginia Infantry, Mahone's Brigade, C. S. A., died at his home in Norfolk, Va., November 10, after a lingering illness, aged 62. The Norfolk Medical Society, at a special meeting, adopted suitable resolutions and decided to attend the funeral in a body.

Rufus H. Bartlett, M.D. Rush Medical College, Chicago, 1879, a member of the American Medical Association; chief medical examiner of the Ætna Life Insurance Company in Chicago; a member of the Chicago Medical Society, Chicago Medicolegal Society, Chicago Pathological Society and Chicago Medical Examiners' Association, died at his home in Chicago, November 21, from typhoid fever, aged 50.

George William Larrick, M.D. University of Maryland School of Medicine, Baltimore, 1878, local surgeon of the Baltimore & Ohio Railroad; for many years a member of the Frederick County Board of Health and of the board of visitors to the Western State Hospital for the Insane at Staunton, died at his home in Middletown, Va., November 6, after two years of invalidism, aged 53.

Edwin Curtis Bidwell, M.D. Medical Institution of Yale College, New Haven, Conn., 1844; surgeon in the Union Army during the Civil War; for nearly forty years a practitioner of Vineland, N. J.; discoverer of the black-rot fungus which threatened to destroy the grape growing industry in 1879, died at his home in Vineland November 14, aged 84.

William C. Voight, M.D. University of California Medical Department, San Francisco, 1879, a member of the American Medical Association and of the Washington County (Minn.) Medical Society, one of the leading physicians of Stillwater, died at his home in that city, November 3, from cerebral hemorrhage, after an illness of one week, aged 58.

Charles Henry Langdon, M.D. College of Physicians and Surgeons in the City of New York, 1874, for twenty-eight years a member of the medical staff of the Hudson River State Hospital, a member of the American Medico-Psychological Society, County Society, died from exhaustion following a second operation for appendicitis, November 15, aged 47.

Eli M. Whitson, M.D. Cincinnati, 1873, a veteran of the Civil War; a member of the American Medical Association; a member and once president of the Grant County (Ind.) Medical Society, died from dysentery at his home in Jonesboro, Ind., November 7, after an illness of two days, aged 62.

Thomas W. Jones, M.D. Medical College of Ohio, Cincinnati, 1847, one of the organizers of the Ohio State Medical Society and for fourteen years treasurer and librarian of the organization; for twenty-eight years a resident of Columbus, Ohio, died at the home of his son in that city November 6, after a long illness, from senile debility, aged 83.

Frederick L. Meagley, M.D. Toledo (Ohio) Medical College, 1890, a member of the American Medical Association, formerly a practitioner of Findlay and Toledo, Ohio, but for two years past in charge of a hospital at Daytona, Fla., died at his home in that place, November 5, from tuberculosis, after a long illness, aged 35.

Fred Stewart Blachly, M.D. St. Louis College of Physicians and Surgeons, 1899, of Modena, Mo.; a member of the Medical Association of the State of Missouri and the Mercer County Medical Society, died at the Missouri Baptist Sanatorium, St. Louis, November 9, after an illness of three years, from paralysis, aged 38.

Joseph Veasey Wallace, M.D. University of Maryland School of Medicine, Baltimore, 1853, of Chesapeake City, Md.; a member of the Medical and Chirurgical Faculty of Maryland; some-time president of the Cecil County Medical Society, died at the home of his daughter, in Lewes, Del., November 16, aged 76.

Charles V. Bogue, M.D. Rush Medical College, Chicago, 1885, for several years a practitioner of Chicago and instructor in the Chicago Policlinic, who afterward, on account of ill-health, removed to Los Angeles, Cal., and later to Newport, Vt., died at his home in that place from meningitis, November 9, aged 51.

Thomas Camille Giroux, M.D. New York University, New York City, 1860, a veteran of the Civil War, attending surgeon to the Eastern District Hospital, Brooklyn, for many years, died at his home in that city, November 3, from heart disease, after a long illness, aged 64.

John Hauenstein, M.D. Geneva (N. Y.) Medical College, 1844, for more than half a century a practitioner of Buffalo, N. Y.; in 1882 president of the Erie County Medical Society, died at his home in Buffalo, November 10, from senile debility, after an illness of two years, aged 84.

D. R. Bookwalter, M.D. Medical College of Ohio, Cincinnati, 1897, died at his home in Dayton, Ohio, November 14, from laryngeal tuberculosis, after an illness of several months. He was a member of the Montgomery County Medical Society and the Ohio State Medical Society.

Friedrich Karl Castelhun, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1852, a prominent German-American poet and practitioner of San Francisco, died at his home in that city, November 1, after an illness of almost eight months, aged 77.

Christopher Fawcett, M.D. University of Maryland School of Medicine, Baltimore, 1864, resident physician to the Union Protestant Infirmary for twenty-seven years; assistant surgeon United States Army 1864-1865, died at his home in Baltimore, November 11, aged 81.

Frank S. Hamlet, M.D. University of Vermont Medical Department, Burlington, 1892, a member of the American Medical Association, and a prominent practitioner of Gorham, Maine, was instantly killed by a fall from the roof of his house November 6, aged 41.

Michelborough Y. Cheatham, M.D. Medical College of Virginia, Richmond, 1872, superintendent of schools of Amelia County, Va., and for several years chairman of the county board of supervisors, died at his home in Amelia Courthouse, Va., November 9, aged 54.

Anthony M. Oldfield, M.D. University of Michigan Department of Medicine and Surgery, Ann Arbor, 1872, committed suicide by shooting himself through the head while despondent on account of ill-health, at his office in Harbor Beach, Mich., November 3, aged 65.

Harry L. Hall, M.D. Medical Department of the Western Reserve University, Cleveland, 1882, for a long time township physician, died at his home in Mansfield, Ohio, from cerebral hemorrhage, October 29, after an illness of only a few hours, aged 69.

Isaac S. Herbein, M.D. Jefferson Medical College, Philadelphia, 1865, twelve years a justice of the peace, died at his home in Strausstown, Pa., November 14, after a prolonged illness, from nervous exhaustion, aged 69.

Louis Henry Dorwin, M.D. Miami Medical College, Cincinnati, 1872, a member of the Darke County Medical Society,

died at his home in Gettysburg, Ohio, from diabetes, November 5, after an illness of two years, aged 57.

George F. Kalb, M.D. University of Maryland School of Medicine, Baltimore, 1902, of Cardiff, Md., died at the home of his parents in Catonsville, Md., November 3, from tuberculosis, after a long illness, aged 24.

Swan Hanson, M.D. (Years of Practice, Illinois), 1888, for several years trustee and alderman of Moline, Ill., died at his home in that city, October 30, from cerebral hemorrhage, after an illness of three days, aged 84.

James G. Boardman, M.D. Rush Medical College, Chicago, 1885, coroner of Stark County, Ill., for many years, died at his home in Bradford, Ill., from pneumonia, October 29, after a short illness, aged 65.

William E. Smith, M.D. Toronto University Medical Faculty, 1863, for twenty-eight years surgeon of the Michigan Central Railroad at St. Thomas, Ont., died at his home in that place, November 8, aged 66.

Andrew Lindsay, M.D. Jefferson Medical College, Philadelphia, 1855, of Bryn Mawr, Pa., died suddenly from heart disease in the railway station at Ardmore, Pa., November 9, aged 76.

Warren C. McManus, M.D. Howard University Medical Department, Washington, D. C., 1889, died at his home in Edgerton, Wis., November 8, from pneumonia, after a short illness, aged 44.

Phineas Sanborn Conner, M.D. Medical College of Ohio, Cincinnati, 1902, of Cincinnati, died at the Seton Hospital in that city, from pneumonia, November 11, after a short illness, aged 28.

Paul Grossman, M.D. University of Breslau, Germany, 1870, of Omaha, formerly a surgeon in the German army, died at Dobbrikow, Germany, October 13, from diabetes, after a long illness.

Thomas Clarke, M.D. College of Physicians and Surgeons of Ontario, Toronto, 1860, died suddenly at his home in St. Catherine's Ont., November 5, from cerebral hemorrhage, aged 75.

George W. Lupfer, M.D. College of Physicians and Surgeons, Baltimore, 1881, of Neff's Mills, Pa., died suddenly from cerebral hemorrhage near Petersburg, Pa., November 2, aged 49.

G. F. Theodore Hoffmann, M.D. Rush Medical College, Chicago, 1861, died at his home in Niles, Ill., November 2, from bronchial pneumonia, after an illness of six days, aged 85.

Charles F. Cookes, M.D. Starling Medical College, Columbus, Ohio, 1882, died at his home in Columbus, November 1, from nephritis, after an illness of more than a year, aged 55.

Denis Collins, M.D. New York University, New York City, 1880, died at his home in Chicago, November 10, from cerebral hemorrhage, after an illness of seven weeks, aged 49.

William Dederick, M.D. County Licensee, Indiana, 1897, died at his home in Warsaw, Ind., October 28, from carcinoma of the liver, after an illness of two months, aged 64.

Charles Carroll Shippen, M.D. University of Maryland School of Medicine, Baltimore, 1879, died at his home in Baltimore, November 6, after a long illness, aged 49.

Benjamin Genung, M.D. Brooklyn, 1869, of Brewerton, N. Y., died at his home in Baltimore, November 7, after an illness of six months, aged 34.

William F. Forien, M.D. Baltimore Medical College, 1899, died at his home in Baltimore, after an illness of six months, aged 34.

Henry C. Wohlgemuth, M.D. Cincinnati, 1854, died at his home in Springfield, Ill., November 11, aged 83.

Mark F. Hamilton, M.D. Philadelphia, 1878, died at his home in Cambridge, Maine, November 5.

Death Abroad.

R. A. Koelliker, M.D., formerly professor of comparative anatomy, physiology and embryology at Würzburg, died November 3, aged 88. His great manual of histology was published in 1852, and has appeared in many editions and been translated into several languages. He issued a volume of reminiscences in 1899 which contained a list of 245 articles which he has published on anatomy, physiology and similar allied sciences, and to this might be added 43 theses written under his supervision by his pupils. Since then he has contributed other important works to science. He is called the "father of cellular physiology," and to him we owe much of our knowledge of the nucleus of the cell and of normal histology, and of physiology in general.

Book Notices

TECHNIQUE DU TRAITEMENT DE LA LUXATION CONGENITALE DE LA HANCHE. By Dr. F. Calot. Avec 206 figures dans le Texte et 5 Planches. Paper. Pp. 293. Paris: Libraires de l'Académie de Médecine, 1905.

Calot's work of 294 pages on the technic of treatment of congenital hip dislocation is profusely illustrated. It aims to present the technic in such a way that any practitioner can treat congenital dislocation of the hip joint without the necessity for referring the child to a specialist, if the child is seen between the ages of 2 and 5. Calot first describes the differentiation of the condition as the child begins to walk, and then tells how to prepare the joint as a preliminary to reduction, and then the various steps of the reduction. He then describes the various types of cases that are liable to be encountered, and the modifications of the technic for older children, bilateral luxation, etc., with histories of cases belonging to each type, profusely illustrated before, during and after treatment.

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By H. Sahli. Edited with additions by F. F. Khunicutt, M.D., and N. B. Potter, M.D. Authorized Translation from the Fourth Revised and Enlarged German Edition. Cloth. Pp. 1003. Price, $6.50 net. Philadelphia: W. B. Saunders & Co., 1905.

Sahli's work on clinical diagnosis has long been known in Germany as an authoritative one. This excellent translation will surely be appreciated by English readers, for it is in every sense worthy and even of superior merit. Every topic is discussed from a broad point of view and the close relations of anatomy, physiology and pathology to clinical phenomena are clearly set forth. It is in no sense a mere compilation; it is permeated everywhere with the spirit of the clinical and laboratory expert who describes methods, technic and results that have been tested by his own ripe experience and his original investigations.

The plan of the work includes the examination of the various organs and systems of the body by the methods of inspection, palpation, percussion, auscultation, etc., with full descriptions of the aids to be derived from instruments of precision, from bacteriology, chemistry and physics. Special methods of examination as in neurology are given in detail. All the chapters are excellent, though it seems to us that those on the examination of the heart, the stomach contents, the urine and the nervous system are exceptionally fine. The value of exploratory puncture as a diagnostic aid and its technic is admirably set forth; the chapter on cryoscopy is an up-to-date monograph; the description of the butyrometric method of examining the functions of the stomach by the method of Sahli and Seiler is a condensed statement of the results of valuable original research. Several tables are found that will prove of great service for reference; we may mention the one showing the substances that respond to the copper and the bismuth tests for sugar in the urine, the one showing the reactions of proteid bodies in the urine, and several in the chapter on the nervous system, as well as the outlines in the appendix, for the examination of the blood, nervous system, digestion, angina, etc.

We are somewhat surprised to find that the dimethylamidoazobenzol test for free HCl in the stomach had to be inserted by the editors. We feel that the so-called Hay's test (with sulphur) for bile in the urine deserves mention, as does peroxid of hydrogen as an oxidizing agent that may be used in some of the tests for indican or for blood in the urine. Bradycardia might perhaps be discussed more fully and esophagoscopy is not given the attention it merits. Only rarely do we find directions loosely given, e. g., those for making Lieben's iodoform test for acetone in the urine. "Some potassium hydrate and Lugol's solution are added to the urine, or better to its distillate" (p. 495). "Some" is altogether too inexact here. Pavy's method for the quantitative examination for sugar in the urine is rather severely condemned. We are pleased to note, however, that Sahli has recently (*Deutsche med. Woch.*, Sept. 7, 1905), reversed this decision and advocates Pavy's method with some slight modification. The value of the Roentgen rays in diagnosis is, we believe, underestimated by Sahli. He omits their consideration, he tells us in the preface, for the reason that he does not consider himself a competent radiologist capable of teaching others, and also be-

cause the *x*-ray examination can only be made by a limited number of practitioners who, in order to be able to do so, must go through a special training; his book is intended for the general education of the physician. The editors have aimed to supply this lack in the book by a few illustrations showing the results of *x*-ray examinations. Most of them are so poorly executed as to be of little value. Occasionally there is a figure that illustrates something to which no reference is made in the text. This is true of Plate 12—or else we have overlooked in the text and index the reference to Kernig's sign. In general the insertions by the editors are timely and appropriate, e. g., the notes concerning uncinariasis, blood-pressure instruments, etc. Not a few typographical errors are to be found. Thus a boric acid stone in the kidney is spoken of on p. 732, where evidently uric acid is meant.

While these few minor criticisms seem to us justified as we have glanced through the volume, we have no hesitation in recommending Sahli's work on diagnosis to student or practitioner. We believe it has no superior in any language.

THE ACCESSORY SINUSES OF THE NOSE and Their Relations to Neighboring Parts. Illustrated by Fifteen Colored Plates by G. Killian. Translated by R. Patterson, M.D., M.R.C.P., Atlas. Price, $7.50 net. Chicago: W. T. Keener & Co.

The superb drawings of this magnificent atlas enable one to acquire clear and definite mental images of the parts considered, whose labyrinthine intricacy is confusing even to the expert anatomist. In making the objects for the illustrations the mucous membrane lining the sinuses was hardened and stiffened by a formalin process, so that the soft parts formed a perfect cast of the cavities to which they adhered. This enabled Killian to show the accessory sinuses in an entirely new and striking way, that is, not as hollows in the ethmoid, sphenoid, frontal and superior maxillary bones, but as a cast of these hollows, a manner of display that produces singularly lucid mental pictures of the shape and location of the accessory sinuses of the nose. A great many fresh bodies were needed to complete the work, which extended over three years.

The artistic finish of the drawings is perfect and their clearness makes them readily understood. The anatomic relations of the sinuses to the orbit, the cranial cavity and the brain are made plain by fenestra made in the bones of the face, nasal fossæ and skull after removal of the outer soft parts. In this way, views of the sinuses through the outer nasal wall, and of the brain as it lies above the frontal sinuses, the ethmoidal cells and the sphenoidal sinuses are portrayed in a manner that is a revelation to those who have long wished to have a clear picture of these parts in their minds. Dissections of those parts of the brain liable to be involved in cerebral abscess due to sinus disease are also shown with their relations to the accessory cavities of the nose, and the optic nerves, the internal carotid arteries, the cavernous sinuses and the nerves of ocular motion are shown as they lie above the sphenoidal sinuses. The intricate grouping of the ethmoidal cells and Killian's new nomenclature of these cavities are made plain.

The text is full and clearly explains the plates, with the lessons to be drawn from their study; a great advantage over most atlases where the beholder is left to hunt out for himself the nature of the structures displayed in scantily lettered drawings without explanatory text; in fact, even without the plates the reading matter of Killian's atlas would give a very good conception of the subject and make an important monograph.

The practical side of the subject is dwelt on, especially in reference to Killian's great work in the surgery of the sinuses and to those wishing to perform his classic radical operation for empyema of the frontal sinus this atlas will be a great aid. The accessibility of cerebral abscess resulting from sinusitis is also thoroughly gone into. The neurologist, oculist and general surgeon will find the book of great value in the study of diagnostic problems, for it explains the difficult relations of the brain, cranial nerves and orbit to the air-containing cavities grouped about the nasal fossæ with a thoroughness and clearness that will save much time and study. The drawings are made from individual cadavers and, therefore, unavoidably contain special features pertaining to the individual body used. These moderate variations from what is typical, however, do not materially take from the value of the work, and it is preferable to have an exact picture of the parts as seen in nature in one subject than to have a composite drawing attempting to show a combination of the usual features in a number, for such drawings are apt to be schematic.

The translation has been done with great care and the difficult problem has been solved of selecting customary anatomic terms in use in Great Britain and America to correspond with the many different ones employed in Germany.

BIOGRAPHIC CLINICS. Vol. III. Essays Concerning the Influence of Visual Function, Pathologic and Physiologic, on the Health of Patients. By G. M. Gould, M.D. Cloth. Pp. 316. Price, $1.60 net. Philadelphia: P. Blakiston's Son & Co., 1906.

In the third volume of "Biographic Clinics" Dr. Gould continues in a characteristically vigorous manner his striking essays on the influence of the visual function on health. He discusses minutely the long invalidism of John Addington Symonds, and Taine, the celebrated French philosopher, historian and critic. As in his previous volumes, Dr. Gould sets forth the prominent rôle of uncorrected eyestrain in their lifetragedies of persistent and seemingly inexplicable physical and mental suffering. There is an extensive chapter on the relation of the newer ophthalmology to general medicine, biology and sociology, being an address read last year at the International Congress of Arts and Science in St. Louis. In Chapter VI the history and etiology of migraine is exhaustively considered, and numerous instances quoted to prove that very many cases of this *bête noir* of neurologists are due to ametropia. The optical and ocular influence in the etiology of spinal curvature and myopia of school children are given careful consideration and many original inferences are drawn and substantiated by striking illustrations. Dr. Gould claims that improper school desks and seats are neither the primary nor chief factors in the production of the faulty postures of school children, and that slanted handwriting, rather than a result of malposture, is in reality a method of lessening its pernicious consequences. Dextrality and sinistrality and their intimate relations with dextrocularity and sinistrocularity afford a wide field for investigation and reason. In a way, it may be said that by his forcible and original arguments Dr. Gould has pre-empted this subject as his own.

While appreciating the valuable and untiring work of the pathologists in the last two decades, Dr. Gould protests against the neglect to inquire with the same enthusiasm into the nature and methods of production of the morbid function which caused the special organic diseases, so capable of plain demonstration in the dead house and pathologic laboratory. After all our rapid advances in the domain of pathology the question recurs as to any explanation of structure except by precedent function. The essayist contends strenuously that in biology the visual function and its perversions have been an important conditioning factor of organic evolution and that the same factor is increasingly a source of evil and failure in all our sociology and pathology. Dr. Gould protests that a continuance of the past indifferent attitude of the medical profession to the importance of eyestrain is "illiberal, unscientific and self-stultifying." He urges that even in Great Britain and Germany the contemptuous appellation "American humbug" is no longer a satisfying corollary to the answer that there is no accurate or scientific demonstration of the relation of extraocular disease with eyestrain. Declaring that there is already a wealth of American articles in confirmation, Dr. Gould reproduces in his book two articles from Great Britain that he calls quite American, and almost Philadelphian, in their context and import. Mr. Simeon Snell, of Sheffield, writes exhaustively on eyestrain as a cause of headache and other reflex neuroses, and Mr. C. Ernest Pronger discourses entertainingly on the influences on the nervous system of slight errors of refraction.

The three volumes of "Biographic Clinics" have called forth much discussion, ranging from an enthusiastic praise to condemnation and contempt. That the author has been over-enthusiastic, dogmatic and emphatic has been frequently charged, perhaps with some justice. But to awaken a proper interest in such an important subject vigorous emphasis is needed. An

ambiguous, timorous or apologetic brief would have fallen flat. On the other hand we fail to see what harm may follow the perusal of such entertaining and illustrative essays. Briefly the author's object is to prove by prominent biographic studies, periodical medical literature and individual experiences that, when not dependent on demonstrable organic disease, "symptoms and affections like headache, sick headache, loss of appetite, paroxysmal neuroses, cardiac palpitation or irregularity, chorea, epilepsy, neuralgia, insomnia and neurasthenia, which exhibit such waves of exacerbations and depression, may be due to ocular irritation." He makes a fervent plea for a careful examination of the refraction and musculature of the eyes in such cases, and contends that in many instances frequent re-examinations under artificial cycloplegia are necessary for the best results, even in patients past middle life. He insists that in all cases the examination should be made by a skilled ophthalmologist who has a proper belief in the importance of the careful correction of even the slightest refractive errors in cases of reflex disturbance.

GRAY'S ANATOMY. Descriptive and Surgical. New American from the 15th English edition. Revised, enlarged and rewritten by J. Chalmers Da Costa, M.D., Professor of Surgery in the Jefferson Medical College, in collaboration with a corps of specially selected assistants. In one very handsome imperial octavo volume of 1,500 pages, with 1,132 illustrations, 500 of which are new in this edition. Price, with illustrations in black and many colors; cloth, $6.00 net; leather, $7.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1905.

All the features which made the former editions of this standard work valuable are retained, while a number of new ones have been added. A profusion of colored illustrations much facilitate the study of the lymphatics, veins, arteries, etc. Fully 500 new illustrations have been inserted, bringing the number to 1,132, and presenting the various subjects from new standpoints. Both the old and the new nomenclature are given, the latter in brackets, and much of the text has been rewritten to introduce the new data. The revision by Da Costa has been thorough and able, and the sections on the Lymphatic System, Abdomen, Brain, Spinal Cord and Nervous System have evidently been entirely rewritten and much enlarged, although the general plan of the book remains unchanged. This brings the number of pages to 1,500, while the index has grown to 52 pages. The edition issued in 1901 had only 1,257 pages and 41 pages of index. The arrangement of the type is an improvement, the subject of the paragraph and the catch words being in larger black type instead of in italics, as in the older editions. The book is a fine specimen of typographical work, retaining the familiar features which make it so convenient for reference and study, and which established it as the standard Anatomy half a century ago, now brought down to date.

A LABORATORY GUIDE IN BACTERIOLOGY for the Use of Students, Teachers and Practitioners. By P. G. Heinemann, Sc.B. Cloth. Pp. 148. Price, $1.50 net. Chicago: The University of Chicago Press, 1905.

The principal purpose in writing this manual, the author states, was to provide a guide for the medical student through an elementary course in bacteriology. No fault can be found with the result achieved. Special stress is laid on the proper instruction of a student inadequately prepared to comprehend the all-important methods of this comparatively new and rapidly advancing branch of biology. Technical proceedings have been described at the stage of application only. The course as outlined includes all well-known pathogenic bacteria, and acquaints the student with their biologic characteristics in such a way as to enable him to recognize them by the prescribed methods. All directions are given in a clear and concise form and cover the ground of bacteriologic technic. Methods for routine examination of air, water, and milk are also described, with practical dilution tables, applicable to serum work. The chapter treating of yeasts, molds and torulæ enables the instructor to select such material as he may deem proper for courses in non-medical bacteriology. The book is profusely illustrated, and a list of recipes for making up special culture media adds greatly to its usefulness.

RADIUM AND RADIO-ACTIVITY SUBSTANCES. By C. Baskerville, Ph.D. Cloth. Pp. 164. Price, $1.00. Philadelphia: Williams, Brown & Earle.

This work is a full account of the latest and most important development in the field of radio-active substances. Special consideration is given to the best methods to be employed for demonstrating radio-activity, with a description of the apparatus to be employed. One chapter is devoted to the application of radium and radio-active substances in medicine. The book is well illustrated. We wish particularly to commend the index, which is full and complete.

AMERIKANISCHEN SPITZFLICHTEN von Carl Beck. Cloth. Pp. 246 Berlin, SW., 48; Verlag von Leonhard Simon NF., 1905.

Beck's "Side Lights on America" is a reprint of articles which were written for the edification and entertainment of the readers of various German medical journals. They are bright and clever sketches in lighter vein of the sessions of the American Medical Association and of the different congresses in this country and various American institutions and happenings. He waves aloft the banner of loyalty to his fatherland through all his remarks, and never misses an opportunity to expatiate on the influence of German science and instruction on the development of American medicine. The book can be heartily recommended to all physicians who wish to perfect themselves in the most modern "student" German while seeing the profession in America and our institutions "as ithers see us," and especially "ithers" with a strange sense of humor. His genuine admiration and appreciation of America is gratifying to one's patriotism. These nineteen articles by Beck have undoubtedly contributed toward the present good understanding between scientists on both sides of the water.

A TEXT BOOK OF CLINICAL DIAGNOSIS by Laboratory Methods. For the Use of Students, Practitioners and Laboratory Workers. By L. N. Boston, A.M., M.D. Second Edition. 330 Illustrations. Cloth. Pp. 642. Price, $4 net. Philadelphia: W. B. Saunders & Co., 1905.

It is a just compliment to Dr. Boston's work that in a year a second edition should be demanded. This book contains most compactly and yet fully stated information on clinical diagnosis. Especially is it to be commended because of its clear description of laboratory technic, but the interpretation of clinical findings, which is the purpose of such a treatise, is quite as commendable. One hundred and thirty-seven pages are devoted to the blood, its morphology, bacteriology and parasitology. As many more to urine, its chemistry and microscopy. Succeeding sections are devoted to gastric contents, feces, sputum and buccal and nasal secretions; discharges from ears, eyes and genitalia; transudates, exudates, cerebrospinal and synovial fluids, milk and diseases of the skin. Much new material has been added in this second edition.

PATHOLOGY AND MORBID ANATOMY. T. H. Green, M.D., F.R.C.P. Tenth American Revised from the Eighth Edition, Revised and Enlarged by W. C. Beaumont, M.A., M.D. One colored plate and 348 illustrations. Cloth. Pp. 616. Price, $2.75 net. Philadelphia: Lea Brothers & Co., 1905.

A book which has reached its tenth edition stands in no need of introduction. Pathology has undergone a most astonishing transforming growth, and each year there appears much that is new and that replaces entirely, in many instances, the older conceptions and theories. This has been most notable in the fields of animal parasitology and of immunity to infectious diseases. These subjects are dealt with fully in the present edition of this work. A most excellent chapter has been added dealing with autointoxication and nutritional diseases. Many new illustrations have also been added. The standard of excellence of former editions has been maintained by the present one.

DISSECTING MANUAL, Based on Cunningham's Anatomy. By W. H. Rockwell, Jr., M.D. Flexible Cover, Pp. 306. Price, $2.00 net. New York: William Wood & Co.

This book is divided into five parts, corresponding to those usually assigned to the student, and in each of these the bones, articulations, muscles, vessels and nerves are grouped together. The descriptions are brief, evidently based on the supposition that the dissector is thoroughly familiar with the anatomy of the part, and that the dissection is intended merely to confirm the correctness of the student's knowledge of anatomy. It is incumbent on him to recognize the structure encountered without the assistance of a descriptive guide or illustration—a very serious objection to a dissecting manual. In fact, the book is little more than an epitome. It is not illustrated.

Physician's Perfect Account Book. By J. J. Taylor, M.D. Leather. Pp. 216. Price, $1.00. Philadelphia: The Medical Council.

This is a neat, compact book for keeping the accounts of patients individually. Entries are made but once, thus effecting a saving in time. The book, it is claimed, will be admitted as evidence in court, as it is a book of "original record." There are index pages, allowing quick reference to the numbered account pages.

Static, High Frequency, Radio, Photo and Radium Therapy. By W. H. King, M.D., LL.D. Cloth. Pp. 291. Price, $2.50. New York: Scerbie & Benyon. 1905.

Evidently this book is intended for the tyro in electrotherapy for the purpose of presenting to him, in concise form, a description of the apparatus needed, and what it can be expected to achieve in the way of results. The work covers only the subjects embraced in the title and does not pretend to be a complete treatise on electrotherapy. It fills the purpose for which it is intended admirably. It is well illustrated.

Miscellany

"Bile Beans."—A curious and not uninteresting light was thrown on the nature of this much advertised and vaunted nostrum in the Court of Session the other day in Lord Ardwall's judgment in an action brought by the manufacturers of the remedy against an Edinburgh chemist to interdict him from using the name "bile beans" for any pills other than those manufactured by them. The history of "bile beans," as set forth in the judgment, is as follows: In 1896 the complainer, then 21 years of age, was in business in Australia in connection with a stationery or printing business. He had no knowledge whatever of chemistry or medicine, but happened to get introduced to the other complainer, Charles Fulford, who, though not a qualified chemist, had served five years in a chemist's shop, and had been connected with the business of a medicine company. The two complainers went into partnership to carry on business as pill manufacturers, and first started the preparation of "Gould's tiny tonic pills," which, however, did not meet with the success anticipated. In the early part of November, 1899, Fulford told his partner that at 4 o'clock in the morning he had hit on a title for a new pill, namely, "bile beans for biliousness," and he prescribed a formula for it. The pill took in Australia, and Fulford proceeded to put it on the English market. Neither the company nor the partners manufactured the pills. Even their name was misleading. They merely sent the formula to manufacturing chemists to make the pill in millions. They advertised on an extensive scale, spending £300,000 in building up the business in the United Kingdom, and issuing 83,000,000 of small illustrated pamphlets for house-to-house distribution, as well as a large number of musical advertisements. If one might judge from the way in which it was perpetually set forth in the forefront of their advertisements, the foundation-stone of their success was the false and fraudulent statement that bile beans were for the most part composed of a natural vegetable substance which Fulford discovered in Australia, which for ages had brought health and vigor to the natives of that inland continent, and which was now being introduced for the benefit of civilized nations. One of the latest advertisements was entitled "Strange Japanese Customs," in which it was said, "Some years back Charles Forde, an eminent scientist, thoroughly investigated the healing extracts and essences of Australian roots and herbs, and after long research he found himself the discoverer of a natural vegetable substance which had the power of acting in the human system in the same way as Nature's own animal substance bile, and which was beyond all doubt the finest remedy yet discovered for all liver and digestive disorders." This statement, said the judge, was both false and fraudulent. There was no such person as Charles Forde, his true name being Fulford; he was not an eminent scientist, having had no scientific training and no standing whatever as a chemist or anything else; he never investigated the healing extracts and essences of Australian roots and herbs; he never made any research; he never was the discoverer of a natural vegetable substance which acted like animal bile. In fact, no such substance existed, and no such substance formed the part of bile beans, which were compounded by wholesale chemists in America out of drugs which they had in stock, no one of which had anything specially to do with Australia. The changes were rung on this wonderful discovery in every pamphlet and advertisement of the complainers. The judge had no doubt that their business was founded entirely on fraud, impudence and advertisement, though it might be that the pill was as effective as any ordinary pill so compounded to act as a cholagogue or ordinary laxative medicine; but it seemed certain that these beans would never have taken hold of the public as they had done except for "the foundation fiction of their being the product of a Great Discovery of an Ancient Australian Medicine by an Eminent Scientist using the most Advanced Scientific Methods and Apparatus."—*Medical Press* (London), Sept. 20, 1905. [Bile beans was a much advertised "patent" medicine in this country a few years ago, but it seems to have had its day.]

Asepsis in Obstetrics.—Cox, in the *Wisconsin Medical Journal*, discusses this subject with a special reference to asepsis in obstetrics in private practice. He states that we can keep as aseptic in a clean room in a well-appointed house as we can in the maternity wards of a crowded hospital, where the danger of infection is tenfold greater than it is in the ordinary American village or town home. The great trouble with many of us is that we hesitate in enforcing our own ideas of cleanliness. When called on to attend a case of confinement, if time and circumstances permit, we should see to it that the obstetric room is made as aseptic as possible. All carpets and heavy draperies should be removed, and all furniture washed in a strong solution of bichlorid of mercury or lysol. If possible insist on new mattresses and bedding. Strong lye or formaldehyd will very effectively sterilize the ordinary house floor. A common potato sprayer will carry the same solution to the walls and ceilings. If possible, the spraying should be done daily for several days prior to the accouchement. The use of the powerful antiseptic has almost entirely annihilated puerperal fever, which, we know, is frequently caused by the entrance, through some wound or abrasion, of some poisonous material into the blood. In the simplest and most natural labors slight tears are apt to exist, involving either the cervix uteri or perineum. Dirty hands, dirty finger nails, unclean napkins, soiled clothing or bedding, may be the cause of grave trouble.

A nurse should not be allowed to touch the genitalia of a patient without first thoroughly disinfecting her hands in a strong solution of formaldehyd or alcohol. Finger nails should be trimmed closely, and the stumps soaked in some strong germicidal solution. It seems hard to make the ordinary nurse understand that antiseptic means against sepsis, or putrefaction. The genital organs of the patient should be made aseptic, or as clean as possible, at the commencement of labor. Shaving the genitals is a good but not imperative practice. Any clothing that may come in contact with her should at least be washed in boiling water and ironed. The complete sterilization of all clothing is practical even outside of hospital life. The hands of the obstetrician must be thoroughly cleansed. It is not at all impracticable for us to carry in our obstetric outfits carbolic acid, lysol, permanganate of potassium and bichlorid of mercury. These, with formaldehyd and absolute alcohol, should be sufficient to make safe sterilization and disinfection in every case possible.

The use of the vaginal douche, the author believes, should be judged for the individual case. In those cases in which there is an offensive lochial discharge, an antiseptic douche should be used. Great care should be exercised, however, that this douche be given aseptically; that all apparatus necessary for giving such douche should be properly sterilized. If the nurse in attendance does not understand asepsis, it is best for the physician either to give the douche or to give definite instructions as to the method of procedure. The same rigid supervision must obtain in the use of the catheter. The great majority of nurses in attendance on obstetrical cases in small villages and rural districts know nothing of the aseptic precautions necessary in catheterization. The author believes that no patient is so deeply buried in septic filth but that

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asepsis or antisepsis may be carried out to a certain degree. He urges the use of one's wits to secure clean material for a bed in even the most isolated cases. He summarizes the treatment as follows: "Observe in every case absolute cleanliness, surgical cleanliness. It pays. When there exists the slightest possibility that the hands of the obstetrician may be infected or that the genital organs of the woman may conceal local germs of infection, then redouble all efforts at sterilization. The healthy, ordinary secretions of the vagina are in their effects antiseptic. Nature has here, as in many other places, interposed conservatively for the welfare of the patient. It is only when, in our bungling insanitary ministrations, we overwhelm the guardian of the citadel with hostile germs that danger results. With this natural safeguard, if we allow the parturient woman to become infected through our neglect, it is little short of a crime.

Newspaper Notoriety in Germany.—Judging from an editorial in the *Deutsche med. Woch't.*, October 12, some of our brethren in Germany have the same itching for newspaper advertising which is too much in evidence with us. We quote: "A form of advertising practiced by certain physicians is too intangible to be made the subject of a complaint before the Medical Court of Honor, and yet is unworthy of the profession and detracts from the prestige of its members. The ever-increasing tendency to strive to be talked about on every opportunity is not becoming to members of a dignified profession. Scarcely any other academic profession supplies so much purely personal material to the daily papers. Professor So-and-So is celebrating his fiftieth, sixtieth, seventieth birthday or his thirtieth, fortieth, fiftieth anniversary as physician, docent, professor or member of the privy council. In the illustrated papers appears the picture of Professor X at the bedside, surrounded by a staff of assistants, nurses and grateful patients, or of Professor Y in the office, in the laboratory, at an operation, or perhaps in his automobile. Among the 'Local Happenings' appears the item that Prince A has entered the private hospital of Dr. B; that Dr. C has been summoned to D for a consultation, or that Professor E has been made corresponding or associate member of some medical association in southern Russia, and so on. Still more regrettable is the publication in the lay press of purely scientific observations, especially when they lay before the public questions which are still unsolved and on which there are still differences of opinion. Their presentation to the public in this way has a tendency to cause the public to distrust the whole of medical science. In a recent debate von Hansemann referred to the good old days 'when it was still the custom to present scientific matters only to the scientific public. Unfortunately things are different now, and when any one thinks he has made a discovery he goes at once to one of the weeklies or dailies or to congress, and, of course, the public learns more about it than if it had been published in Virchow's *Archiv* or any other exclusively medical publication.' Recently another mode of obtaining publicity has come into vogue. We read in the papers, a few months ago, that a certain surgeon had just performed his thousandth operation in a special field, and that his fellow-citizens celebrated this unusual event with a reception and congratulations. Not long ago we noticed in a daily paper from a neighboring country that a clinician there had just performed his two-thousandth herniotomy, and that on this joyful occasion he had received an ovation in his clinic." The editorial concludes: "We gladly acknowledge that many items of this nature appear without the knowledge of the celebratee and are sincerely distasteful to him, but there is no doubt that in a large number they are directly inspired or at least favored or tolerated by the one whose name is mentioned. All the members of the medical profession must unanimously strive to change this state of affairs. Especially should the 'upper ten thousand' scorn and set their faces against these newspaper notices."

Physicians and Public Hygiene.—We hear now and then of the force of awakened public sentiment. The very phrase implies that public sentiment sometimes sleeps, and while awakening and rubbing its eyes and getting its bearings, your practical politician, who never sleeps, will snatch the prize for which he is scheming—the control of public affairs, the key of the public treasury. What is needed in this land and in this day is a live, active, wideawake, always vigilant public sentiment, not one which needs awakening or is only aroused into action by some public or official scandal. In this respect no class can set a better example than the members of the profession to which we belong; none, I fear, is more apt to feel that these matters need not engage their attention. We are, I take it, united as to the necessity of clean and well-paved streets, of a pure water supply, of an efficient system of sewage for our cities and towns, and yet of the hundreds of doctors who realize the importance of these matters, how many personally take the pains to help secure the best men and the most efficient means to accomplish these things?—Hurd, in *Buffalo Medical Journal*.

Wisdom of Belgian Judges.—A Belgian neurologist, Dr. Famenne of Florenville, conducts a family sanitarium for nervous diseases, and among his patients last year was a man of 32 who seemed to have lost all interest in life. For more than a year he had done nothing but eat, drink, sleep and wander around. He was not neurasthenic, but slightly paranoiac, and was sent to the sanitarium by a physician at Charleroi. Treatment included psychic re-education, manual labor and hydrotherapy. Among the tasks imposed by Dr. Famenne to interest, encourage and train the young man was the translation of an English work describing cures of cases of neurasthenia. He translated 40 out of the 170 pages of the book, under the doctor's supervision and encouragement. After leaving the sanitarium the young man sued the physician for $60 in payment for the translation of this work. The first court condemned the physician to pay this amount, with costs. Appeal to a second court confirmed this sentence, but reduced the remuneration for the translation to $30. The final court of appeals, however, reversed the decision and imposed the costs of the suit on the plaintiff.

Minor Points in Obstetrics.—A German confrère states that the degree of relaxation of the soft parts during a delivery may be estimated from the behavior of the lower eyelid. The floor of the pelvis yields parallel to the facility with which the lower lid can be everted. His communication was published in the *Med. Klinik*, No. 26. Winkler has also recently called attention to the necessity for warmth as a means of promoting delivery. It is a physical process, and as such is attended by expenditure of heat. If the organism is weak from anæmia, fatigue or chilliness, the physical process proceeds with less energy, and it may prove necessary to resort to forceps. Before doing so, however, the patient should be thoroughly warmed, which may restore sufficient energy for delivery to terminate spontaneously. His experience has been that a warm tub bath or a sitz bath with cloths wrung out of hot water applied to the thighs and a hot foot bath are liable to start vigorous contractions. Hot drinks are valuable adjuvants. The position in the sitz bath also favors expulsion, the weight of the child and the heat irritating the lower segment of the uterus. The *Gaz. Méd. Belge* for September 23 summarizes both the above communications.

Resuscitation by Direct Massage of the Heart.—Another instance is related by Senecrt, of Nancy, France. The patient was a man of 51, who had undergone an operation for gallstones, under chloroform, in 1904, without mishap. During a second laparotomy, last April, he took the chloroform well, but during the search for the obstruction in the biliary passages the rectus muscles contracted and respiration stopped abruptly. The usual measures not bringing relief in seven minutes, Senecrt inserted his hand through the laparotomy wound and was able to grasp the lower part of the heart in his hand, notwithstanding the interposition of the diaphragm. He then stroked it rhythmically with his thumb in front and his fingers at the back of the organ. In five minutes after this had been commenced the heart began to grow hard and larger, and in a few moments he felt a spontaneous contraction. The contractions grew gradually stronger and stronger, the pulse returned, and the patient began to breathe. The surgeon sutured the abdomen at once, and the patient recovered without further trouble except for slight transient intercostal pains. A detailed description of the case is given in the *Jour. de Méd. de Paris*, Sept. 24, 1905.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

BOOK ON MEDICINE FOR LAITY.

ADRIAN, MINN., Nov. 14, 1905.

To the Editor:—Will you kindly give me the name of a good safe work on popular medicine that a self-respecting physician can recommend to the laity? M. SULLIVAN.

ANSWER: "Personal Hygiene," by W. L. Fyfe, M.D., is a good one, published by W. B. Saunders & Co., Philadelphia, $1.50. Another good work, by Lyman, Fenger and Belfield, $2.50, may be had of the W. T. Keener Co., Chicago.

RESTORATION OF FLABBY BREASTS TO NORMAL.

ILL.

To the Editor:—Is there anything you can recommend for the treatment of flabby breasts resulting from pregnancy and parturition? I shall be pleased to know of anything that will help to restore them to their normal condition, as I am frequently consulted in this condition. A. C., M.D.

ANSWER: The normal rotundity and plumpness of the breasts are due largely to the deposit of adipose tissue. During pregnancy, the glands develop and during lactation become more active, and the fatty deposits are somewhat absorbed. With the cessation of lactation there is a decline in size of the glandular elements, and this, at times, without a corresponding increase in adipose tissue. Especially is this apt to be the case if the patient is poorly nourished. At times there is seen a general atrophic process in the breast structures.

The patient should be in the best possible physical condition, by proper diet, exercise, baths, massage, etc. Constitutional diseases such as syphilis, tuberculosis or anemia, should receive proper attention. Locally, massage with oil is used with good effect in many of the "rest cure" establishments.

"IN VITRO."

——, ILL., Nov. 18, 190:.

To the Editor:—I see in many articles the phrase "in vitro," which I suppose means "during life." If English is superior to another language when the same meaning is conveyed, why is the Latin used? E.

ANSWER.—This amusing confusion of terms by our correspondent was duplicated by several well-educated and well-read physicians of whom we asked the meaning of "*in vitro*." It is, therefore, of sufficient interest to receive explanation here: *Vitro* evidently comes from the Latin *vitrum* (glass), and the phrase means "in glass," i. e., "in the test tube" or "in test tube experiment." Our correspondent was probably thinking of "*intra vitam*" or "*in vivo*" (Latin *vivo*—to live; be alive; or *vivus*—having life), either of which may stand for "during life." We agree that it is better to use English than Latin phrases when the meaning is the same. In this case, however, the English "in the test tube" is a little more cumbersome.

KOPP'S BABY'S FRIEND.

OMAHA, Aug. 22, 1905.

To the Editor:—What is the composition of the compound prepared by Mrs. J. A. and C. Robert Kopp, at York, Pa., and sold under the shop name of "Baby's Friend"? A patient of mine gave her three days'-old baby four drops of the stuff and the child went into a stupor at once. The pupils were pin-pointed, skin cool, and the heart beat and the respirations were slow. I treated this case as one of opium poisoning, but it was twelve hours before my little patient was out of danger.

R. H. EHRLICHMAN, M.D.

ANSWER—A bottle of this preparation was purchased and the contents analyzed. According to the analysis, "Kopp's Baby's Friend" contains, in 100 c.c., 0.0719 gm. morphin sulphate; approximately 1/3 of a grain in one fluid ounce.

BULL'S COUGH SYRUP.

Monocco, Ind., Sept. 6, 1905.

To the Editor:—Can you give me the formula for "Dr. Bull's Cough Syrup"? Recently I was called to see a child twenty-three months' old who had drunk about an ounce of it. In an hour, when first seen, the symptoms were those of opium poisoning. In about twelve hours the child had several convulsions and spasms followed at intervals for twelve hours longer. The child then sank into a coma and died in the seventy-second hour with cardiac failure. Respirations were labored. The dose of the mixture as labeled is five drops for a child of two years.

J. W. SHAFER, M.D.

ANSWER.—A bottle of this preparation was purchased in the open market and the contents analyzed. According to this analysis, "Bull's Cough Syrup" contains, in 100 c.c., 0.0534 gm. morphin sulphate; approximately ¼ of a grain in one fluid ounce.

State Boards of Registration

COMING EXAMINATIONS.

Wyoming Board of Medical Examiners, Cheyenne, December 6. Secretary, S. B. Miller, Laramie.

Examining Board representing the President and Fellows of the Medical Society of Delaware at Dover, and the Homeopathic Board, Wilmington, December 12. Secretary, P. W. Tomlinson, Wilmington.

Ohio State Board of Medical Registration and Examination, Columbus, December 12-14. Secretary, F. Winders, Columbus.

Medical Examining Board of Virginia, Richmond, December 13-15. Secretary, R. S. Martin, Stuart.

Board of Medical Examiners of Maryland, Baltimore, December 13-16. Secretary, J. McScott, Hagerstown.

State Board of Health of Missouri, Kansas City, December 19-21. Secretary, J. A. S. Adcock, Warrensburg.

Board of Medical Examiners State of California, San Francisco, December 20. Secretary, Charles L. Tisdale, San Francisco.

California July Report.—Dr. Charles L. Tisdale, secretary of the Board of Medical Examiners of the State of California, reports the written examinations held at San Francisco and Los Angeles, July 19-21, 1905. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 93, of whom 48 passed and 45 failed. The following colleges were represented:

PASSED. College.	Year. Grad.	Per Cent.
University of Minnesota	(1902)	75
University of Pennsylvania	(1904)	75.7
Rush Med. Coll.	(1901) 76.7; (1903) 83.4; (1904)	76, 82
Cooper Med. Coll.	(1905) 75, 75, 75, 75.4, 75.6, 76.3, 76.5, 77.1, 77.4, 77.4, 77.8, 77.8, 79.2, 79.8, 80.1, 80.5, 81.5, 84.3, 84.6, 85.5.	
University of California	(1905) 75, 77.4, 80.4, 83.3, 84.2	
Cornell University	(1903)	80.7
University Southern California	(1906) 75, 77.6, 78.6, 79.5, 79.6, 79.6, 79.7, 79.8, 80.7, 81.8.	
Johns Hopkins University	(1905)	79.4, 82.4
Medical College of Indianapolis	(1898)	75, 79.1
College of P. & S., Chicago	(1903)	75.8
Northwestern University, Chicago	(1905)	76.2

FAILED.		
Denver & Gross College of Medicine	(1903) 82.3,	(1905) 72.2
University of Louisville	(1882)	51.5
Columbus Med. Coll.	(1891)	50.2
Missouri Med. Coll.	(1877) 67.5; (1887) 69.4;	(1896) 54.5; (1898) 61.6.
College of P. & S., Baltimore	(1904)	74
Chicago Med. Coll.	(1890)	61.6
College of P. & S., San Francisco	(1905) 69.4,	72.4
University of Southern California	(1906 19.4.* 63.5, 67.2, 69.2, 69.4, 69.7, 70.5 71.6, 72.5.	
University of California	(1905) 71.6,	72.6
Medical College of Indiana	(1903)	61.6
American College of Med. and Surg.	(1903)	64.7
Cooper Med. Coll.	(1905) 16.3.* 53.8, 64.4,	71
Hahnemann Med. Coll., San Francisco	(1901) 61.1;	(1905) 73.2
University of Maryland	(1904)	73.4
Tulane University	(1905)	69.6
Kansas City Med. Coll.	(1894)	66
Washington University	(1903)	74
Marion Sims Med. Coll.	(1897)	68.2
Marion-Sims-Beaumont Coll. of Med.	(1903)	67.8
Rush Med. Coll.	(1889) 64.2,	(1901) 67.1
Cleveland Med. Coll.	(1895)	60.4
College of P. & S., Chicago	(1903)	71.6
University of New York	(1894)	72
University of Michigan	(1881) 72.1;	(1889) 68.2
Northwestern University Med. Coll.	(1899)	68.4

* Took only 3 subjects.

Florida October Report.—Dr. J. D. Fernandes, secretary of the Regular Board of Medical Examiners of the State of Florida, reports the examination held at Jacksonville, Oct. 10-11, 1905. Ten questions were asked in each branch, and the percentage required to pass was 75. The total number of individuals examined was 28, of whom 3 failed and 1 withdrew from examination. The following colleges were represented:

PASSED. College.	Year. Grad.	Per Cent.
Jefferson Med. Coll.	(1905)	92.8
College of Medicine and Surgery, Detroit	(1904)	84.7
Woman's Med. Coll., Baltimore	(1904)	84.8
Baltimore Med. Coll.	(1905)	90
Baylor University, Texas	(1905)	85
Howard University	(1905)	87.4
University of Kentucky	(1903)	84.2
Bellevue Hosp. Med. Coll.	(1890)	82.4
Johns Hopkins University	(1901)	83.4
Royal College of P. and S., Edinburgh	(1882)	84
Meharry Med. Coll.	(1903)	78.1
Tulane University	(1905)	80, 84.7
University of Michigan	(1900) 87; (1904) 84.7;	(1905) 86.5, 90.3
College of P. & S., Baltimore	(1903)	84
University of Georgia	(1903)	84
University of Maryland	(1903)	91.5
Vanderbilt University	(1905)	92.3

Western Reserve University	(1899)	75
Georgia Med. Coll., Augusta	(1905)	87.5
College of P. & S., New York	(1905)	92

FAILED.

Meharry Med. Coll.	(1905)	69.2, 69.2
Jefferson Med. Coll.	(1899)	57

Vermont October Report.—Dr. W. Scott Nay, secretary of the Vermont State Board of Medical Registration, reports the written examination held at Burlington, Oct. 10-12, 1905. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 11, all of whom passed. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
University of Vermont	(1899) 76.4; (1897) 78.4; (1904 84, (1900, 83.6, 84.6, 86.6, 86.1, 90.7..	89.9
Jefferson Med. Coll.	(1905)	79.1
Barnes Med. Coll.	(1905)	83.1

The following questions were asked:

OBSTETRICS.

1. Give symptoms of placenta previa. 2. Give treatment of puerperal fever. 3. Treatment of nausea and vomiting of pregnancy. 4. Give symptoms of extrauterine pregnancy with rupture. 5. What are the indications for premature delivery? 6. What are the indications for the use of forceps? 7. Describe the mechanism of breech presentation. 8. Give treatment of eclampsia. 9. Give indications for use of anesthetics. 10 What directions would you give the nurse regarding the care of the infant during the first week?

GYNECOLOGY.

1. Give symptoms of prolapsus uteri. 2. Give treatment of dysmenorrhea. 3. Differentiate ovaritis and appendicitis. 4. Give treatment of chronic metritis. 5. Give treatment of menorrhagia.

CHEMISTRY.

1. Briefly describe molecular attraction. 2. Briefly explain disinfectants, germicides, antiseptics, deodorizers. Give example of each. 3. (a) How are normal solutions made? (b) What are decinormal solutions? 4. Mention the chief constituents of blood and state those predominating in corpuscles and plasma, respectively. 5. (a) Describe method of obtaining urea from urine. (b) Name normal pigments of urine. (c) What conditions cause an increase in the quantity of ammonia in the body?

PATHOLOGY.

1. What is the most important curative agent, not a drug, in all virulent infective diseases? 2. Describe the postmortem appearances usually found in acute pneumonia. 3. What pathologic appearances would you expect to find in a fatal case of pleurisy? 4. In a prolonged case of dysentery from the tropics what changes would you expect to find postmortem? 5. How do the postmortem appearances in acute miliary tuberculosis differ from those of ordinary chronic phthisis?

MATERIA MEDICA.

1. (a) How is opium obtained? (b) What percentage of morphine should it normally yield? (c) Name four alkaloids of opium and give doses. 2. Briefly give description and properties of ergot. 3. Name two arterial sedatives, and state in what condition they should be given. Give dose of same for a child one year old. 4. Give of Norwood's tincture of veratrum viride, digitalis, gelsemium, belladonna, sodium salicylate, potassium iodid, podophyllin, calomel, cimicifuga, muriatic acid, bichlorid of mercury. 5. Give composition and doses of the following: Fowler's solution, Lugol's solution, Donovan's solution, Basham's mixture.

THERAPEUTICS.

1. Explain the principle governing the treatment of convulsions when due to toxic agents in the blood. Name two conditions and give treatment. 2. Name some conditions in which the bromids are indicated and state method of giving large doses. 3. Write a formula for the following: Coryza, laryngitis, gastralgia, acute articular rheumatism, delirium tremens. 4. Briefly give therapeutic indications for creosote and guaiacol. In what conditions would guaiacol be superior to creosote? 5. Name four diuretics. Give physiologic action and therapeutic indications for same.

PRACTICE OF MEDICINE.

1. Describe the symptoms and course of a case of sthenic pneumonia, unmodified by drugs, in a robust young adult. 2. What are the indications for treatment in pneumonia? How much and under what circumstances may medicines be expected to influence results? 3. How would you diagnose a case of pleurisy with effusion? 4. How does nature proceed to cure a simple pleurisy? 5. What is the difference between simple diarrhea and dysentery. 6. Give the symptoms and the most common causes of acute gastritis. 7. What are the symptoms of cystitis and how is it to be distinguished from nervous irritability of the bladder? 8. Describe the course of a typical case of typhoid fever. 9. How do the symptoms and course of acute miliary tuberculosis differ from those of ordinary chronic phthisis? 10. What are the symptoms and most common causes of cirrhosis of the liver?

LEGAL MEDICINE.

1. What is understood by cadaveric rigidity and putrefaction? 2. Describe the examination of a wound in a dead body. 3. Give causes of death in new-born children. 4. What is understood by legitimacy? 5. Give a definition of insanity.

PHYSIOLOGY.

1. Give the general structure of the nervous system. 2. What is meant by reflex action, of the nervous system? 3. Name the branches of the fifth cranial nerve, and give the distribution of the same. 4. Give the name and source of the inorganic proximate principles. 5. Give the composition of the bile, organic and mineral salts. 6. What are the normal constituents of urine? 7. Describe rigor mortis, also tetanus. 8. Describe the process of digestion and absorption of food. 9. Describe the lymphatic system, and give its function. 10. Describe the different kinds of muscular tissue, and the mode of action of each.

HYGIENE.

1. What evils arise from outside privy vaults? How may such evils be averted in cases in which these vaults can not be replaced by modern arrangements? 2. Mention the different methods of bathing and state the hygienic rules to be observed in each. 3. How would you build and furnish a school house, observing hygienic rules? 4. Give the rule for quarantine in yellow fever, also same for cholera. 5. Give the cause of diphtheria and the necessary precautions to prevent it.

SURGERY.

1. Name the three chief forms of bacteria. 2. What is suppuration and how caused? 3. Name the varieties of tumors. 4. Give the differential diagnosis between fracture and dislocation. 5. Describe the operation for removal of the breast. 6. Describe the method of skin grafting. 7. Give symptoms, dangers and treatment of acute synovitis. 8. Describe the varieties of talipes. 9. Give the treatment for chancroid. 10. What are the dangers in passing a catheter or steel sound?

ANATOMY.

1. Name the bones of the face. 2. What essential structures enter into joint formation? 3. Describe the diaphragm. Name its openings and state what passes through each opening. 4. Beneath what points on the anterior surface of the chest walls are located the valves of the heart? 5. Give the origin, course and termination of the vertebral artery. 6. Give a general anatomic description of the lymphatic system. 7. Mention the coverings of the brain. Describe one of these coverings. 8. Give the gross anatomy of the testicle. 9. What structures are found in the right inguinal region? 10. Mention from without inward the structures covering a femoral hernia.

BACTERIOLOGY.

1. How do bacteria multiply? 2. What microbes are found in abscesses? 3. Name three germicides, and five antiseptics. 4. What diagnostic point can be determined by a microscopic examination of the urine? 5. In order to prove conclusively that a certain micro-organism is the cause of a certain specific disease, what fundamental conditions must be satisfied?

Oregon July Report.—Dr. B. E. Miller, secretary of the Board of Medical Examiners of the State of Oregon, reports the written examination held at Portland, July 13, 1905. The number of subjects examined in was 15; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 57, of whom 21 passed and 36 failed. The following colleges were represented:

PASSED.

College.	Year. Grad.	Per Cent.
Detroit College of Medicine	(1891) 75; (1904)	81.6
Northwestern University	(1897)	77.6
University of Minnesota	(1903) 75.7; (1904)	80
University of Pennsylvania	(1891) 76.8; (1902)	81.4
College of P. & S., Chicago	(1903)	82.8
Temple Med. Coll., Philadelphia	(1905)	76
American Med. Miss. Coll., Chicago	(1904)	78
Rush Med. Coll.	(1902) 82; (1904)	86.7
University Med. Coll., Kansas City	(1904)	78.6
Cooper Med. Coll., San Francisco	(1904)	79.4
California Med. Coll.	(1900)	77
University of Michigan	(1902)	80.7
Imperial Alexander University, Finland	(1897)	75
Gross Med. Coll., Denver	(1900)	77.8
Medico-Chirurgical College, Philadelphia	(1905)	75
Hamline University, Minneapolis	(1897)	75
College of P. & S., San Francisco	(1905)	76.8

FAILED.

College of P. & S., California	(1905)	70
Vanderbilt University	(1899) 69.6; (1897)	69.8
University of Oregon	(1903 64, 64.5, 68.7, 69.6, 70, 71,	73
Bellevue Hosp. Med. Coll. of N. Y.	(1899)	70.5
University of Buffalo	(1882)	69.8
Willamette University, Oregon	(1905) 65, 66.8,	67.6
Eclectic Med. Institute, Cincinnati	(1903)	73.9
College of P. & S., Chicago	(1902) 73.8; (1905)	74.4
Rush Med. Coll. in Chicago	(1904)	72.4
Chicago Med. Coll.	(1884)	72.4
Kansas City Med. Coll.	(1895) 70.4; (1904)	56
Rush Med. Coll.	(1903)	73.4
Cooper Med. Coll., San Francisco	(1904)	68.8
Southern Homeo. Med. Coll., Baltimore	(1897)	65
Marion-Sims-Beaumont Coll. of Med.	(1904)	62.6
Medico-Chirurgical College, Missouri	(1905)	73.7
Tulane University	(1901)	70.4
Dallas Med. Coll., Texas	(1904)	67
American College of Med. & Surg., Illinois	(1904)	9
College of P. & S., New York	(1904)	74.8
Bennett Med. Coll., Chicago	(1905)	70.8
Iowa College of P. & S.	(1884)	74.6
Non-Graduates	38.9,	47.7, 59.5

The Public Service

Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, week ending November 18:

De Loffre, S. M., asst. surgeon, reported for temporary duty at Presidio of Monterey, Cal.

Kneedler, Wm. L., surgeon, relieved from duty at Fort Rosecrans, Cal., and ordered to proceed to Manila, January 28, where on arrival he will report to commanding general, Philippines Division, for duty.

Greenleaf, Harry S., asst.-surg., relieved from duty at Fort Moultrie, S. C., and ordered to proceed to Manila on January 28, where, on arrival, he will report to the commanding general, Philippines Division, for assignment to duty.

Buck, C. D., asst.-surgeon, left Fort Leavenworth, Kansas, en route to accompany troops from Fort Riley, Kan., to Fort Sam Houston, Texas.

Ruffner, H. L., Brooks, Wm. H., asst.-surgeons, ordered to report in person, November 27, to Major Wm. H. Arthur, surgeon, president examining board, Army Medical Museum Building, Washington, D. C., to determine their fitness for advancement to the rank of captain.

Noble, E. E., asst.-surgeon, left depot, recruits and casuals, Fort McDowell, Cal., on 30 days' leave of absence.

Gibson, H. C., asst.-surgeon, assigned to duty as surgeon of the transport "Buford" during next voyage to Manila; on arrival at latter place will report in person to commanding general, Philippine Division for assignment to duty.

Brown, R. H., asst.-surg., reported for temporary duty at depot, recruits and casuals, Fort McDowell, Cal.

Blanchard, R. M., Baker, Frank C., Woodbury, Frank T., asst.-surgeons, reported for temporary duty at Army General Hospital, Presidio of San Francisco, Cal.

Duncan, Louis C., asst.-surgeon, ordered to proceed from Manila, P. I., to San Francisco, Cal., on transport to sail April 15, 1906, instead of December 15, 1906.

Capps, Milton, asst.-surgeon, relieved from further duty in the Philippine Division, and ordered to depot of recruits and casuals, Angel Island, Cal., for duty.

Noble, E. E., asst.-surgeon, relieved from duty at depot of recruits and casuals, Angel Island, Cal., and ordered to Fort Casey, Wash., for duty.

Jones, George H., contract surgeon, left Fort Fremont, S. C., on sick leave for two months.

Rice, Hugo C., dental surgeon, left Fort Wayne, Mich., and arrived at his proper station, Fort Sheridan, Ill.

Beall, Dental surgeon, returned to Fort Washington, Md., from leave of absence.

Love, Thomas S., contract surgeon, granted an extension of one month to his leave of absence from the Philippines Division.

Quarles, William A., contract surgeon, left Fort Monroe, Va., and arrived at Fort Greble, R. I., for temporary duty.

Branch, Frederick D., contract surgeon, ordered to Fort Jay, N. Y., for temporary duty.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending November 18:

Vickery, E. A., asst.-surgeon, detached from the *Franklin* and granted leave until December 1:

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ending November 15:

Banks, C. E., surgeon, relieved from special temporary duty at Century, Fla., and directed to rejoin station at Key West, Fla.

McIntosh, W. P., surgeon, granted leave of absence for twenty-one days from November 15.

Blue, R. P. A., surgeon, relieved from special temporary duty at New Orleans, and directed to rejoin station at Norfolk, Va., and granted six days' leave of absence from November 15.

von Ezdorf, R. H., P. A. surgeon, directed to proceed to Biloxi, Miss., for special temporary duty.

von Ezdorf, R. H., P. A. surgeon, relieved from duty at Biloxi, Miss., and directed to proceed to Havana, Cuba, for duty.

Fricks, L. D., P. A. surgeon, directed to report to Surgeon G. W. Stoner at Ellis Island, N. Y., for duty.

Kerr, J. W., P. A. surgeon, directed to transfer inspection duty from Galveston to St. John, N. B., on or about November 17.

Richardson, T. F., P. A. surgeon, relieved from special temporary duty in New Orleans, and directed to rejoin station at Savannah, Ga.

Long, J. D., P. A. surgeon, directed to report to the Governor General of the Philippine Islands for duty as assistant director of health of said islands.

Long, J. D., P. A. surgeon, granted leave of absence for one month.

Bocker, W. C., assistant surgeon, relieved from special temporary duty at New Orleans, and directed to rejoin station at Mobile.

Ward, W. K., asst.-surgeon, directed to report to Surgeon G. W. Stoner, Ellis Island, for duty.

Pettyjohn, Joseph, asst.-surgeon, relieved from duty at Fort Stanton, N. M., and directed to proceed to San Francisco, reporting to the medical officer in command for duty and assignment to quarters.

Spratt, R. D., asst.-surgeon, granted leave of absence for seven days from November 17.

Alexander, E., acting asst.-surgeon, six days' leave of absence granted from November 10, amended to read six days from November 17.

Ewing, J. T., acting asst.-surgeon, granted seven days' leave of absence from November 7, under paragraph 210 of the regulations.

Foster, S. B., acting asst.-surgeon, granted leave of absence for ten days from October 21.

Gregory, G. A., acting asst.-surgeon, granted leave of absence for fourteen days from November 11.

Stanton, J. G., acting asst.-surgeon, granted leave of absence for thirteen days from November 6.

Teppan, J. W., acting asst.-surgeon, granted leave of absence for twenty-three days from November 13.

Stearns, W. L., pharmacist, three days' leave of absence revoked.

Stearns, W. L., pharmacist, relieved from special temporary duty at Century, Fla., and directed to rejoin station at Santa Rosa Quarantine.

Gibson, F. L., pharmacist, granted one day's leave of absence, November 1, under paragraph 210 of the regulations.

Medical Organization

MEDICAL ORGANIZATION IN NORTH DAKOTA, MONTANA, IDAHO AND WASHINGTON.

By J. N. McCormack, M.D.

Chairman of the Committee on Organization of the American Medical Association.

BOWLING GREEN, KY.

For reasons which will appear later these four states group themselves together naturally for the purposes of this report. District meetings were arranged for me at Fargo and Bismarck, in North Dakota, and at Billings and Butte, in Montana. I missed connection for the appointment at Billings, but my place was ably filled by Dr. Campbell, president of the Montana State Association, and a good meeting was held. The other meetings were well attended by the local profession at each place and by such representative men from the respective states as enabled me (in the course of the free and frank discussion which always followed my talk) to get a very fair knowledge of almost everything relating to professional conditions.

I visited the state meetings in Washington and Idaho, the former at Tacoma and the latter at Boise. Both were well attended, and I have never participated in meetings in any part of the country where there was such an active and intelligent interest in every question bearing on the elevation of professional standards and the betterment of professional conditions. After every opening talk they insisted on a suspension of the regular program and devoted hour after hour to careful study of the detailed methods for building up and maintaining the interest in their county societies, by post-graduate work and otherwise, of weaving in and utilizing the district societies to the best advantage in the sparsely settled regions, of enlisting the support and co-operation of the laity, and especially of the learned professions—the lawyers, editors, teachers, clergymen and pharmacists—and of securing and enforcing medical and health legislation. In the course of these heart-to-heart talks I was able to make a study of their short, plain legislative history, and professional evolution, in a most instructive and profitable way, the more so now, because, in the light of my large experience in this work, such studies are naturally and almost insensibly comparative.

It was soon clearly developed that the Minnesota profession had builded wiser than it knew in securing advanced legislation and in fixing high standards in that state at an early day. Their laws had been copied almost literally in all four of the states, the same high standards were established under them, and in some respects with even better results. Thus North Dakota was the first state to secure an effective statute requiring that all patent and proprietary medicines containing alcohol and narcotics should show the exact amount of such substances on the label of each bottle or package. This state also has an almost ideal pure food and drug law, an excellent one for encouraging the study of anatomy, and a state bacteriologic and pathologic laboratory. The administration of the pure food, drug, nostrum and similar laws is in the hands of the chemist and director of the State Agricultural Experiment Station—a layman. He has the active co-operation of the organized profession, is executing these statutes without fear or favor, and can probably do so more effectively and with less opposition than he could if he were a medical man.

The same difficulties and opposition were encountered in securing the passage of this advanced legislation as would have to be met in the older states. Such unusual success was only possible through the able, tactful leadership of Dr. F. R. Smyth, chairman of the committee on public policy and legislation, aided by a few strong medical and lay members in both houses of the general assembly, and a united and high-grade profession, which deserved, and to a remarkable degree commanded, the respect and confidence of their representatives.

The other states included in this report have accomplished much in the same directions, more than in most of the older states, but none of them has been so successful as North Dakota, probably because they have not been so fortunate in selecting a leader.

Although the geographical and other difficulties incident to a new and sparsely settled country are more pronounced and formidable here than in many other sections of the country, and although the work is recognized here as being in its infancy, more has been really done, and there is more of the real spirit of organization, more of the unity of purpose, faith

and enthusiasm, necessary to secure results, than I have found anywhere else. Careful investigation soon convinced me that these highly desirable conditions were easily traceable to two principal causes: First, to their well devised and rigidly enforced laws, and high standard examinations under them, which at an early day turned the current of graduates from low grade commercial medical colleges into less favored states. Second, and only less important, to the fact that the profession in this section is usually so well supported financially that its members can and do constantly avail themselves of the benefits of postgraduate instruction in the great medical centers, supply themselves with high-class standard and periodical literature, and otherwise equip themselves for modern scientific work, in a way possible only to a fortunate few in many parts of the country. With the minimum office consultations and prescriptions fixed at $2, day visits at $2.50 to $3, and night visits almost uniformly at $5, visits in the country $1 per mile, ordinary obstetric fees from $20 to $25, and surgical fees in the same proportion, as I found them established more firmly as my duties took me further west, it was easy to understand why higher qualifications and better equipment were within easy reach of the rank and file of the profession. It should also be said, for the benefit of those who might be tempted by this roseate picture of fees and conditions, that the climate over most of this section is very severe, that reciprocity with other states is not favored, for reasons which appear fairly satisfactory to an impartial observer, and that their examinations are such that none but well-qualified men need hope to be successful in passing them. In addition to the advantages already enumerated, made possible by the higher standards and better financial support, I was constantly impressed that there was a truer spirit of altruism pervading the profession. This has already been indicated in the greater interest taken in all affairs in regard to which medical men owe a public duty, but it was evident also in a broader and more discriminating charity for the poor. In these representative men from the mountains and plains, especially those in middle life and older, there seemed often the counterpart of Dr. William McClure, the general practitioner of the "Bonnie Briar Bush," whose story should be known, and whose noble charity should be emulated in a still higher and more discriminating way under modern methods and conditions. My constant observation is that young physicians do not do charity practice cheerfully or with good grace. I have repeatedly urged, and shall continue to do so until it is accomplished, that every medical school in this country should give a regular course of instruction in business methods, in professional conduct and in organization or co-operation, but this should always include such advice as to the obligations of the physician to the poor, to God's poor, as will guard against mistakes not creditable to such a profession as ours.

Finding that professional and public sentiment had crystallized and set in undesirable forms in most of the older states, I had long believed that it might be practicable to secure model organization and legislation in some of the new states, and hold these up as examples for their less fortunate, fad-ridden sisters. A careful study, made possible during this trip, has converted this belief into a conviction. Quackery has gained little foothold here, comparatively, and the profession has such a high place in the public esteem that if all of the forces at its command can be united, and a proper man selected in each state to lead the movement, there should be no doubt about the result. The urgent need here, and everywhere, is such an organization of the profession in each county where there are as many as four or five active physicians, as will enable them to hold meetings devoted to the discussion of questions of public policy, to which shall be invited their senators, representatives, judicial and other officers, lawyers, editors, teachers, clergymen and other leaders of thought, and educate them as no one but competent medical men can do, and which they will fully appreciate if it is properly done, not only as to the necessity for such legislation and work for the proper protection of the public, including them, their families and neighbors, but as to the duty and unselfishness of the profession in leading the reform movement. If this can be undertaken in a comprehensive, common-sense way, even in a third of the counties in each state, and, after such a leaven has worked for a while, if a well selected, tactful representative of the profession can be found, who has the respect of legislators and other officials, who knows and has the confidence of their medical constituents, and who can bring these individuals and their interests into such relationship as will prove to the interest of all concerned, and if he can be kept at the capital during each session of the general assembly, the influence of the profession in promoting its own and the public welfare would soon become irresistible. If medical colleges could only have realized and taught from the first that ours is a co-operative profession and not a competitive trade, that even as between those of the same locality there are nine good reasons for co-operation and harmony for every poor one for contention and discord, physicians would have been as harmonious as lawyers, and health and medical boards would have been just as much a part of the warp and woof of our system of government as the courts are. This is what the new plan of organization stands for, all it stands for, and if our medical schools can be induced to take up their part of the work, even at this late day, the difficulties will be greatly lessened in the states now under consideration and in the country at large.

The hospitality and cordiality of these western doctors was so warm and constant that this feature of the visit to each locality will always be with me a pleasant memory. Paraphrasing the invocation of Tiny Tim, I earnestly pray, "God bless them all; may they live long and prosper."

Illinois.

URBANA, CHAMPAIGN, AND CHAMPAIGN COUNTY MEDICAL SOCIETY.—A new medical organization was organized in Champaign, October 19, with Dr. William K. Newcomb, Champaign, president; Dr. William F. Burres, Urbana, vice-president, and Dr. W. E. Schowengerdt, Champaign, secretary.

Indiana.

FOURTH DISTRICT MEDICAL SOCIETY.—This society, composed of physicians belonging to the medical societies in the counties of the fourth congressional district, was organized, October 26, at North Vernon, with a charter membership of about 85. Dr. William H. Stemm, North Vernon, was elected president, and Dr. James K. Ritter, Seymour, secretary and treasurer, while the presidents of the various constituent county medical societies will act as vice-presidents.

Michigan.

FOURTH DISTRICT MEDICAL SOCIETY.—The first annual meeting of this society was held at Port Huron November 8. Dr. David Inglis, Detroit, president of the state medical society, delivered an address on "Medical Ideals." At the banquet, in the evening, Dr. Charles C. Clancy, Port Huron, served as toastmaster, and responses were made by leading members of the profession of Detroit and eastern Michigan.

Minnesota.

AITKIN COUNTY MEDICAL SOCIETY.—The organization of this society was perfected at Aitkin, October 2, by the adoption of the standard constitution and by-laws and the election of the following officers: President, Dr. Carlton Graves; vice-president, Dr. J. Fowler Avery; secretary, Dr. A. G. Balsheim, and treasurer, Dr. James W. George, all of Aitkin.

Missouri.

GENTRY COUNTY MEDICAL SOCIETY.—On October 31, six physicians of the county met in Albany and took preliminary step to effect a permanent organization of the practicing physicians of the county.

Ohio.

GEAUGA COUNTY MEDICAL SOCIETY.—A number of physicians of the county met in Burton, October 5, and organized this society, with the aid of Dr. William E. Lower, Cleveland, councilor of the fifth district, and Dr. Clyde E. Ford, of Cleveland. Dr. Frank S. Pomeroy, Chardon, was chosen president, and Dr. Albert D. Warner, Burton, secretary and treasurer. A committee, consisting of Drs. Albert D. Warner, Burton, Nicholas F. Schwartz, Auburn, and Ida B. Peffers, Middlefield, was appointed to draft a constitution and by-laws.

Oklahoma.

SOUTHWESTERN OKLAHOMA MEDICAL ASSOCIATION.—At a meeting of the Kiowa County Medical Association at Hobart, November 9, the question of forming a medical association for the southwestern Oklahoma county societies was taken up and favorably acted on. As a result, a temporary organization was formed, embracing Kiowa, Washita, Custer and Green counties. Dr. W. L. York, Hobart, was elected temporary president, and Dr. Alfred H. Bungardt, Cordell, temporary secretary. A permanent organization will be perfected at a meeting to be held in Cordell on Jan. 10, 1906.

Pennsylvania.

SHENANDOAH MEDICAL SOCIETY.—The Shenandoah Medical Society was organized, September 27, with the following officers: President, Dr. Stephen C. Spalding; vice-president, Dr. Harry M. Wasley, and secretary, Dr. William J. Scanlan.

Society Proceedings

COMING MEETINGS.

Southern Surgical and Gynecological Association, Louisville, Ky., Dec. 13-14.
American Dermatological Association, New York, Dec. 26-30.
Western Surgical and Gynecological Association, Kansas City, Mo., Dec. 27-28.

OHIO NINTH DISTRICT MEDICAL SOCIETY.

Meeting held at Gallipolis, Oct. 31, 1905.

DR. LESTER KELLAR, Ironton, was chairman, and DR. JOSEPH S. HARDIN, Portsmouth, acted as secretary.

At the opening of the session 52 physicians were present from various parts of the district. The meeting was held at the laboratory of the State Hospital for Epileptics, and was followed by a banquet in the same building arranged by the local society.

The Business Side of Practice.

DR. PRESTON SHILER, Piketon, discussed many of the evils prevalent in the profession and made valuable suggestions for improvement.

Pleuritic Effusions.

DR. E. T. BANDO, Wellston, dwelt on the insidious character of the disease and the frequency with which it is overlooked and a wrong diagnosis made. A diagnosis of tuberculosis is frequently made and the lung destroyed, or greatly crippled, before the true condition is discovered. He classified the cases as serous, serofibrinous and purulent. The causes are pneumonia involving the pleura, pyemic conditions elsewhere, infections from contagious diseases, such as scarlet and typhoid fevers, measles and whooping cough, and pneumothorax. In some cases it follows rupture of tuberculous cavities. The treatment of the serous cases is medical, either alone or with the aid of aspiration. In the early purulent cases, cure would usually follow incision, opening, cleansing and drainage. In chronic purulent cases, Estlander's thoracoplastic resection is advisable. If let alone, almost all patients will die.

In the discussion, the necessity of early and careful examination was emphasized, as was also the importance of lack of open resonance in diagnosis. Aspiration was said to be valuable when bacteria are not present, but in purulent cases free drainage is essential.

DR. ORRIN C. ANDRE, Waverly, advised the injection of small quantities of Thiersch's solution to replace the liquid removed by operation. He also considered the syrup of the iodid of iron a valuable remedy in the serous cases.

DR. BROOKS F. BUSH, Cincinnati, said that effusions are very often not discovered, and believed that this, in many cases, is on account of the lack of careful examination.

Perineal Laceration.

DR. WILLIAM E. PRICER, Ironton, read a paper on "Laceration of the Perineum, Frequency, Causes, Prevention, Treatment." Hospital records show that laceration occurs in about 30 per cent. of primary deliveries and in 10 per cent. of subsequent deliveries. He classified three degrees of laceration: First, those half-way to the sphincter ani; second, those extending to the sphincter ani, and, third, those extending through it. Many methods of prevention have been advised, but none is effective in all cases. In many instances it is impossible to prevent laceration, and censure should not follow when it happens. Immediate operation was advisable in almost all cases.

DR. CHARLES L. BONIFIELD, Cincinnati, believed that 90 per cent. of primiparæ were lacerated. The only method of prevention worthy of mention was the use of chloroform in the second stage. Lacerations should be repaired as soon as possible, chromicized catgut being the best suture material.

DR. JOSEPH H. RAY, Coalton, expressed his opinion that if more care were taken regarding physical exercises during the development of the girl, and in the period of pregnancy, fewer puerperal lacerations would occur.

Otitis Media.

DR. GEORGE M. MARSHALL, Portsmouth, considered that many cases of otitis media are neglected and that ill results follow failure to make early incision into the tympanum, thereby evacuating infected discharges from the middle ear. Enlarged tonsils and extension of infection from the exanthemata are the chief causes of this condition.

Banquet.

The association adjourned to meet at the Banquet Hall, where the local society had provided substantial entertainment. Dr. John B. Alcorn, Gallipolis, acted as toastmaster.

NEW YORK NEUROLOGICAL SOCIETY.

Regular Meeting, held Oct. 3, 1905.

The Vice-President, DR. J. ARTHUR BOOTH, in the Chair.

Types of Hysterical Insanity.

DR. ROBERT C. WOODMAN read a paper on the outcome of a symptomatic study of the insanities during the past two and a half years. Cases not clearly belonging to any well recognized insane type had been especially scrutinized, and some had been found to show hysterical stigmata, while other atypical cases without stigmata presented mental symptoms very similar to those of the hysteric. His observation and study had shown that there were among the committed insane a considerable number of hysterics, and those cases were, in many instances, violently insane for considerable periods. Any medical classification that ignored that fact was incomplete, and concealed important clinical distinctions. The recognition that some hysterics, as such, were insane, helped to bridge the gap between mental diseases and general medicine, and made more easy the conception of other insanities as thinking disorders; as functional in the same sense as ordinary thought was functional.

Dr. Woodman's paper, in summary, analyzed the symptoms that insane hysterics presented. He found the origin of the attack in emotional experiences; it pursued an episodic course; there was an absence of marked disturbance in the stream of thought, excepting in dazed and stuporous states; there was a natural point of view concerning indifferent topics; often periodic amnesia; a loss of the ability to do mental or physical work, but with little or no motor retardation, and, on the emotional side, usually anxiety and fear. Cases were quoted in which the anxious depression preceded the hysterical stigmata, notably in one involutional case, and the question of a close relation of hysteria to anxious depressions at any time of life was raised, especially as to its relationship to recurrent melancholic attacks without manic alternations. Some non-conclusive evidence on the relation of hysteria and dementia præcox was submitted, and some other symptom complexes which hysteria had been found to take were referred to.

DISCUSSION.

DR. ADOLPH MEYER said that the hysterical insanities are a rather interesting group from a theoretical point of view, inasmuch as they represent one of the clearest types of mental disorder, in which the psychogenic element is uppermost. Their recognition is also of decided importance from a prognostic and therapeutic point of view. A large number of the cases—indeed, the majority of the attacks which rank plainly as insanities, are, however, of a rather transitory character, and for that reason, perhaps, there is need of a detailed knowledge of the disorders, for their treatment has thus far aroused comparatively little interest. That phase of the subject must of necessity be preceded by a study in broad lines of the symptom-complex, such as Dr. Woodman's paper gave. While in some there was a distinct history of hysteria, with hysterical stigmata well marked, and the whole mechanism of the disease characteristically hysterical, there were others in which the symptom-complex seemed to coexist with well-recognized forms of insanity, such as dementia præcox and the manic-depressive type, as well as involutional melancholia; and his suggestion concerning the latter is certainly worth attention; but under those conditions it was usually apparent that it was subordinate to the more decisive phenomena of the major affection. Some points which had of late been especially touched on in the literature of hysteria; namely, the ganser complex, had not been especially considered by Dr. Woodman, and perhaps with some justification, as it might well be regarded as an afterfact of clinical investigation, when it goes beyond the scope of the analogous states actually described.

Ricklin, published in the *Psychiatrische Wochenschrift*, and reviewed in the *Psychological Bulletin* of July, 1905.

Dr. Arthur C. Brush said that if we accept the old idea that hysteria was a mental phenomenon that was to a greater or lesser extent met with in the entire human race, it would be difficult to see how Dr. Woodman could differentiate between these so-called hysterical insanities and the true insanities. That the former were nothing but exaggerations of what was normally present in the human being is undoubtedly true, for even sane people have at times hallucinations and delusions and automatic dream states. The sudden onset of the symptoms in these cases of so-called hysterical insanity, and the sudden recovery from them, would sharply distinguish them from cases of true insanity, as would also the lack of mental deterioration. Dr. Brush said he did not wish to be understood from this as questioning the propriety of proper treatment in dealing with cases of so-called hysterical insanity, but until we could clearly define insanity and hysteria, he did not think we could accept the latter as a form of insanity.

Dr. William M. Leszynsky said that as a rule it is exceedingly difficult or impossible, in the majority of cases to make a satisfactory or accurate determination of the visual field. For this requires on the part of the patient, persistent concentration of attention and considerable judgment. It is possible, however, in some cases to decide as to hemianopsia or marked concentric contraction.

Dr. George W. Jacoby said he was rather surprised to learn that this class of cases was considered in any way unusual, and he could only explain this on the ground that they were regarded from a different standpoint by the psychiatrist and alienist in contradistinction to that of the neurologist. The latter regards many of the somatic features of hysteria as distinct delusions, and if that interpretation is correct, then it is only one step further to the development of distinct insanity.

In the recognition of these cases of so-called hysterical insanity it would be necessary to study the previous history of the patient, and exclude the various other forms of insanity, such as epileptiform insanity, delirium of various kinds, catatonia, etc. Given, a case in which there was a previous history of hysteria, together with the course and clinical features pointed out by Dr. Woodman, and the diagnosis of hysterical insanity could in time be made, but whether a diagnosis could be made from the course alone, without such a previous history of hysteria was questionable. The value of such an early diagnosis lies chiefly in the prognosis and treatment, but the speaker said it would be a decided mistake to believe that all cases of hysterical insanity were of short duration. He recalled instances where recovery was delayed for two or three years.

Dr. Jacoby said he agreed with Dr. Leszynsky that it would be exceedingly difficult to base the diagnosis of hysteria on somatic symptoms, such as restriction of the visual field, hemianesthesia, etc., because patients of that class are usually very unreliable in their statements, and susceptible to suggestions of all kinds.

Dr. Edward D. Fisher said he would certainly draw a distinction between cases of mental disease occurring in those who gave a previous history of hysteria and in those who gave no such history. The former, as a rule, do not run the typical course observed in melancholia, or in so-called mania, using the older terms, but they may assume more of the paranoic form. The duration of these hysterical insanities, as Dr. Jacoby had said, is often prolonged. He recalled cases of this kind where restraint became necessary on account of the development of suicidal or homicidal tendencies, and where some mental instability persisted for some time after the disappearance of the acute symptoms.

Dr. J. Arthur Booth said that the type in which there are convulsive seizures and hemianesthesia, with narrowing of the visual field and marked emotional disturbances, is not difficult to recognise. In some of the other types referred to, however, the diagnosis of hysterical insanity should be made with great circumspection; for just as in many organic diseases of the nervous system hysterical disturbances are not infrequently observed, so in certain psychoses, other than the one under consideration, emotional disturbances occur, which would not justify one in grouping these cases as types of hysterical insanity.

Dr. Woodman said he believed that in hysteria both the physical symptoms and such mental disturbances as are regarded as insane have a common basis in a characteristic thought disorder. He did not wish to be understood as presenting the provisional classification of the cases he had reported in his paper as a classification of hysterical insanity. He simply used these headings as guide posts to give some idea of where, among the many groups of insanities, we might look for the hysterical type.

Dr. August Hoch, of Bloomingdale, read a paper on "Flight of Ideas."

PHYSICIANS' CLUB OF CHICAGO.

Regular Meeting, held Oct. 24, 1905.

Dr. Frank Billings in the Chair.

The subject under discussion was "The Establishment of a Permanent Medical Home and Library for the Physicians of Chicago and of Cook County."

Suggestions as to Organization.

Dr. Charles L. Dana, New York, outlined the history of the organization of the New York Academy of Medicine, and offered suggestions concerning the establishment of a similar organization in Chicago. The New York Academy of Medicine was founded in 1847, when there was no other medical society, for the purpose of affording physicians an opportunity to meet together and discuss scientific problems. The original membership numbered 200. Incorporation papers were taken out later, so that the society could own property. In 1872 a library was started, and in the early 80s the society purchased a building worth $30,000. It was early felt that the influence of the medical profession should be exerted for the public welfare as well as for the promotion of medical science, and the society has always taken an active part in the promotion of sanitary measures. It was through the influence of the academy that the city board of health was established, and through the activity of its members the medical supervision of the school children was instituted. The society has never interfered directly with nor has it attempted to promote medical legislation, except in those broad measures which involve the general well-being of the public. Its membership has always maintained a high standard. The academy owns a library of 90,000 volumes, containing not only all the standard works and monographs, but a full series of the most important medical journals of the world. The library is open to the fellows day and evening for most of the year; to non-members it is open for a certain number of hours during the day, and the public also are permitted to use it on presentation of the card of a fellow. Members are entitled to borrow books, and books are sent to them while they are away from the city.

In 1889 funds were raised by contributions and donations to erect the present home of the academy. This building has a capacity for a large library, has meeting rooms for the different branches of the academy and other medical societies, a central hall, parlor and refreshment rooms. The academy now owns property worth $700,000, all of which has been accumulated during the past twenty-five years. The academy has not undertaken any original investigation in any special line of work, directing its energies solely to the promotion of sanitation and the study of problems connected with public medicine. It brings before the public and the profession itself questions involving hospital organization, and public education, and always has in mind the fact that when its influence as a great medical body can be exerted in behalf of proper action by the state, it will be so exerted.

The academy is accessible to every educated physician of good standing and of at least three years' experience. It provides opportunities for consulting one of the best libraries in the country, and for presenting and discussing medical problems. It provides social opportunities for its members and

aims to keep clear of all cliqueism and politics. The membership is limited to 1,000. There are 100 non-resident fellows and a few honorary fellows. The fellows pay an initiation fee of $20 and annual dues of $10. The non-resident members pay half that sum.

A board of trustees, consisting of five members, has control of all the finances of the academy. The executive work of the academy is in the hands of a council, which consists of the president, three vice-presidents, two secretaries, the treasurer, the five trustees, the chairman of the committee on admissions, and the chairman of the committee on library, a total of fourteen. The council attends to the general management of the academy. Working under the council is the librarian, who is also the executive officer of the council. The income of the academy from trust funds amounts to about $2,500. The income from dues amounts to about $17,000. The income from other funds, such as initiation fees, etc., amounts to $18,000, making a total annual income of about $37,000. The annual maintenance of the library is about $14,000; maintenance of building, including heating, lighting and insurance, and salaries, about $11,000; expenses for scientific and organization work, about $2,100. The surplus is placed in a sinking fund.

The scientific organization of the academy is as follows: There is a central body, which meets twice a month for eight months in the year. These are the stated meetings of the academy. One of these meetings is devoted to an annual discourse and to the delivery of an endowed lecture on some medical topic. The academy is divided into nine sections, each of which has a chairman and a secretary. These sections have the free use of the academy for their meetings. Each section pays its own running expenses. The chairman of the section has full control of the work of that section. Once a year each section must present before the general body of the academy a paper or a discussion which is expected to show either some special development in that particular branch of medicine or which details the relationship of that section to general medicine. The sections meet once a month.

The College of Physicians of Philadelphia.

DR. W. W. KEEN of Philadelphia wrote that this, the oldest medical body in the United States, was founded in 1787. The college holds a scientific meeting once a month, and monthly meetings are held by a number of sections. The college has been the professional adviser of the city in matters of health and hygiene, especially in times of epidemics or other emergencies involving the health of the city. It is also a center for professional meetings, and some non-medical organizations assemble in one of the meeting rooms. No rental is charged these societies, because the college is exempt from taxation. A small fee is charged, however, to cover the expenses of heating, lighting and janitor service. Originally the college met in private houses, later in a room in the Pennsylvania Hospital. In 1865, through bequests, subscriptions and donations, a sufficient sum was obtained to erect the building now occupied by the college. The library contains over 75,000 volumes and 75,000 pamphlets, besides a number of duplicates. The growth of the library has come from gifts of publishers, of fellows, and of friends of the college, public institutions and hospitals, medical societies and bequests of deceased fellows. Through the influence of fellows of the college library funds have been established as memorials of doctors, or of non-medical persons. The endowment funds of this character, which are only available for purposes of the library, amount to about $65,000. Two other sources of additions to the library exist; one is the journal club, to which a large number of the fellows subscribe $3 a year, the journals going directly to the library, and the other is a directory for nurses established by the college some years ago and which more than pays for itself. The profits accruing from this directory go to the library.

Establishment and Maintenance of a Medical Library.

DR. NICHOLAS SENN said that in Chicago the time is ripe for taking active steps for the establishment of a library that will be a credit to the city and to the profession. The physicians need only the encouragement of example to take an active interest in such an undertaking. He has made an attempt, by example, to furnish a nucleus for such a library by donating to the Newberry Library the largest portion of his own library, including the surgical library of Professor Baum, and the physiologic library of Professor Dubois-Raymond. Dr. Senn said that when the Chicago profession has a permanent home he proposes that that collection shall grow where it shall be accessible to all physicians. It is his purpose also that that collection shall become the best and largest antiquarian medical library in the world.

Plans of the John Crerar Library.

MR. CHARLES ANDREWS, librarian of the John Crerar Library, outlined the plans of that institution with reference to the provisions the library intends to make for a permanent home for physicians, as well as a place for the Senn library. The new building of the Crerar Library is to contain suitable meeting rooms for medical societies and their committees, as well as rooms for the secretaries, which may be used as society headquarters.

Cleveland Academy of Medicine.

DR. P. MAXWELL FOSHAY related the method by which the city of Cleveland acquired a permanent home and a medical library. Twenty-five doctors formed a society whose annual dues are $25. The running expenses were kept at $1 per capita, and the balance was invested in interest-bearing securities. A few years later the Cleveland Medical Library Association was organized, with three classes of members. Those who held the franchise paid annual dues of $30. An active membership cost $10 a year, and an associate membership $3 a year. Subscriptions and donations were solicited from outsiders. Enough money was raised to make a payment of $10,000 on property valued at $14,000. The house was remodeled to suit the purposes of the association, and books were secured by gift and by purchase. The association is now engaged in raising funds to erect a large auditorium and to make additions to the present home.

Other speakers were Dr. D. R. Brower, Dr. I. N. Danforth, Dr. C. S. Bacon and Dr. L. Harrison Mettler.

AMERICAN ACADEMY OF MEDICINE.

Thirtieth Annual Meeting, held in Chicago, Nov. 9-10, 1905.

(Concluded from page 1598.)

Effect of Recreation on the Nervous System.

DR. WILLIAM JAMES HERDMAN, Ann Arbor, Mich., said that when we undertake to consider recreation after toil as a need of the human organism it is in some part, if not in the whole, of the nervous system, where that need has arisen. This is quite as true of mental as of physical labor, of emotional expenditure of energy as of that which results in glandular secretion; it is the nervous system which must "pay the piper," for it is in its structure chiefly where the need for molecular reconstruction has arisen. A life that is all work, narrow in its range, pouring out its store of nerve energy in muscular effort, unvaried, monotonous; an occupation that makes a mere machine of both body and mind, and keeps that machine incessantly employed day in and day out, gradually, but surely, leaves its permanent imprint on that plastic substance, the nerve tissue, which serves as the medium of action and reaction between the physical forces on the one side and the mental and spiritual on the other. It becomes fixed and restricted in its channels of communication. Both the receptive and expressive capacities of the mind of such a man atrophy from disuse, destroying the possibilities of a larger life. Continued and unvaried draughts on the reservoir of energy, which every nervous system has stored, no matter through what channel the depletion takes place, not only disregard directly the law of recuperation for the organs so used, but indirectly through the neglect of other faculties, limit the sources from which new supplies of nerve force might be supplied.

Recreation, physiologically speaking, is local sleep for an exhausted part, not general sleep, and the fundamental principle of all recreation consists in this local rest which is secured by a change of organic activity. In the brain of man, with its common source of nutrition, but with its complex centers and

functions acting independently, the plan best suited for recuperating lost force in a functionating center is to excite activity in some associate center. The needed conditions in blood supply and lymphatic action, in commissary and scavenger service, are thus maintained, and the work of reconstruction is hastened and promoted. If, at the same time, the processes of nutrition are accompanied by agreeable emotions, the organism is in the most favorable state for quick and abundant restoration of energy to the exhausted part. In stating that recreation consists in shifting the activity from an exhausted to a rested area of the nervous system, no new fact has been revealed nor any new principle evolved. The practical methods by which suitable recreations are to be selected to meet the requirements of special classes or individuals must start from this fundamental principle, but they will vary as taste, occupations and opportunities vary. From the complexity of occupations in which our fellows engage there results the greatest variety of channels through which the store of nervous energy is depleted. Likewise taste, inclination, interests and opportunities for their exercise are so various that the transfer to congenial and, at the same time, possible activities as recreative means is largely a matter for individual decision. Outdoor plays and games, requiring some skill, such as boating, fishing, swimming, skating, horseback riding, gardening, toolwork and the like, are of much more recreative value than any of the artificial gymnastics which have no purpose nor incentive beyond the movement itself. For the brain worker, the way is open to recreations innumerable, and the opportunity for choice and the possibility of varying their character at will makes the problem of healthful living an easy one if a man would cultivate a sufficient variety of interests, so that when one channel of activity is, for any reason, closed to him as a relief from necessary work he can choose another. The practical result in this is seen when we compare the statistics of health and longevity of the brain-worker and of the muscle-worker. The researches of Beard and others have shown that brain-workers not only live from 14 to 20 years longer than muscle-workers, but that their health is more uniformly good and their stature of larger average. When mankind is once emancipated from the conception that honest work is contemptible drudgery and learns to recognize the pleasures and recompense it has in store when rightly apprehended, which means that the work selected must be suited to individual capacities and tastes, and when greed and selfishness give place to a spirit of mutual helpfulness, the problem of recreation will be solved.

Recreation as a Sociologic Factor.

Dr. Donly C. Hawley, Burlington, Vt., said that, while work is necessary and ennobling and is the law the universe obeys, refreshment of the strength and spirits after toil is likewise a necessity, which finds expression in the natural cravings of the social instinct and in the general desire for diversion and amusement. The social instinct demands satisfaction, and will find it in recreation and amusement, which is either beneficial and uplifting, or injurious and degrading. In attempting to bring about the social benefit of the working classes, of the very poor and of the criminal and vicious elements in any community, the first and greatest need is healthful recreation. One of the great sociologic needs of the day is admittedly a solution of the so-called labor problem, but of equal importance and hemmed about with greater difficulties is a solution of the leisure problem. One of the ways of bringing about the social betterment of the masses, in the opinion of the author, is by providing proper channels for the expression of every social want and every social sympathy. The author thinks that if we can improve the conditions and surroundings of the children of the poor, give them educational and industrial advantages, and control their amusements and recreation, we shall have solved, in a large measure, an important problem for the next generation, as formative processes will, in large measure, render unnecessary those which are reformatory. This applies with force to children in all classes of society. Parents should recognize the fact and the necessity of furnishing at home, and in properly conducted places, amusements and recreation which shall be satisfying and at the same time uplifting and educational. Teachers everywhere should also be made to realize the importance of this question and to use the opportunities which their positions afford in influencing the children under their care to seek recreation which recreates and amusements which will bring the most perfect joy.

Physiology of Recreation.

Dr. George W. McCaskey, Fort Wayne, Ind., said that the primary predominant factor in practically all forms of recreation is the psychical one. The sudden change from a state of extreme depression and misery, with perfectly distinct physical suffering, to one of buoyancy and exultation, with entire forgetfulness of self, as a result of a change of emotion, is a not unfamiliar experience in the lives of most people. If the various forms of recreation are closely scrutinized, it would be found that those diversions and amusements which produce the promptest and most brilliant effects on both the mental and physical states of those who participate in them, are precisely those in which the psychical impression is the strongest. The first requisite in what may be termed successful recreation is a complete diversion from self, a complete submergence of self-consciousness, which inhibits that everlasting introspection of our physical selves which is the foundation of half the morbidity of the world. How this can best be done is a problem for the individual and depends on his age, sex, social status, intellectual development and other factors which go to make up the complete ego. McCaskey called attention to the purely physical or mechanical aspects of many forms of recreation, and said that the systematic introduction into our lives of such recreation as is suited to the individual needs should be the rational aim of all, and a proper understanding of the physiological laws and facts which underlie the whole subject can not be otherwise than helpful. He concludes with the admonition of Virgil that "rural recreations abroad, and books at home, are the innocent pleasures of a man who is early wise."

Relation of Recreation to Education.

Dr. R. K. Row, superintendent of schools, Berwyn, Ill., presented a brief statement of the recognized psycho-physical theories of play. First—The surplus energy theory assumes in the higher forms of life a series of inborn impulses for whose serious activity there may be, for a long time, no opportunity of discharge. As a result a reserve of exuberant energy collects and presses for employment, thus calling for an ideal satisfaction of the impulse in the form of play. Second—Teleologic theory begets a tendency in the organism to practice those activities that will be needed later in life; a means of getting control of the racial inheritance of co-ordinated power and skill. Third—The organic selection theory, in part at least, includes the first and second. From the random movements of the preconscious control period the organism selects those that give pleasure and repeats them; later, these and the movements of associates, are imitated and the pleasurable activities persist in playful repetition because the organism finds them to be vital to conserve life and promote growth and development so long as growth is possible. Out-of-door games, plays and recreations are the best means of physical education. Co-operative games promote social education. They develop the qualities of leadership, self-reliance, self-control, and the spirit of co-operation in social groups. Recreation is a very large and vital factor in esthetic education. Recreative activities have also important ethical functions.

Ceremonials and Fests in the Recreation of Larger Groups of Individuals.

Dr. Bayard Holmes, Chicago, said that the value of the pageant has been well recognized by every organization which has aimed to secure a control over public opinion and public life. The educational and social function of the pageant can not be confined to any one class or age. It has a use for every class and for every member of society. The wonder of the child and his imagination are touched by the color and tinsel and tawdry illuminations as by no reality of life. For the youth the occasion is one of unequaled liberty and freedom from restraint. He attains almost the buoyancy of the savage. For the young adult it furnishes the occasion for prenuptial amenities. For those in the prime of life abundant

opportunity is given for the display of success in any and every activity of life. The social, the economic and the political success can be ostentatiously exhibited without the odium of effrontery or vulgarity. Even the aged may receive the scanty satisfaction of an honorable decline. But the extension of the influence of the pageant and the communal festivity reaches farther and cultivates and encourages every joy-giving activity of life.

Medical Features of the Papyrus Ebers.

DR. CARL VON KLEIN, Chicago, described the papyrus in general and in detail and discussed prehistoric medicine from about 5,000 years before the Christian era to Hippocrates. The paper will appear in THE JOURNAL.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held Oct. 25, 1905.

The President, Dr. James M. Anders, in the Chair.

Operative Treatment of Fractures of the Patella.

DR. JOHN H. GIBBON stated that the two factors which render the non-operative treatment of fractures of the patella difficult are, first, the attachment to the upper fragment of a powerful group of muscles which, if not properly controlled, constantly tend to separate the fragments, and, second, the interposition of ligamentous or tendinous structures between the fractured surfaces. The latter are the most important and most difficult to overcome and can not be obviated except by operation. The operation is justifiable if done in an absolutely aseptic manner. In every case the fragments of the broken patella are covered with fibrous tissue. Multiple fracture is another complication which makes mechanical coaptation uncertain and difficult. Gibbon believes that the treatment of fractures of the patella should consist either of the simple splint method or of one of the operative procedures which include a complete exposure of the fractured bone and torn ligaments. All the intermediate methods, while possessing none of the advantages of the open method, have the same danger as the open method, namely, sepsis. Reference was made to Stimson, who, in about forty cases in which the subcuticular suture was used, had two severe infections with stiff joint, while in a series of about two hundred cases treated by the open method there was but one slight infection and no stiffness of joint. Suture of the bone alone has passed out of use, the operation being done either by a simple suture of the lateral ligaments and fibrous tissue over the bone, or this with the addition of one or two sutures through the patella itself. Early operation is advocated. When operation is not done immediately, a tight bandage with ice bags should be applied to prevent effusion of blood. The incision recommended is a transverse curvilinear one, allowing easy access to the torn ligaments. An absorbable suture, preferably chromicized catgut, should be employed and the sutures should not be tied very tight. The leg should be dressed on a posterior splint and well elevated; the dressing changed at the end of a week and the stitches removed. Later the splint should be removed at frequent intervals and massage practiced. After three or four weeks the splint could be discarded, when the patient is in bed, and massage regularly employed. He advises passive flexion of the leg after four weeks. The period of convalescence after the operative treatment is less than half that following the splint method. The operative treatment should only be undertaken in a well-appointed operating room by a surgeon who has developed the "aseptic habit." Where the operator has not had a great deal of experience, and where the surroundings are not perfectly aseptic, it is wiser and safer to pursue the splint treatment, for, if suppuration occurs, a stiff joint, the loss of the leg, or even death might result.

DISCUSSION.

DR. JOHN B. SHOBER referred to the development of the open method and attributed the success attendant on it to the greater attention given to the ligaments in freeing the overlapping fibrous tissue. Formerly the major attention was given to the coaptation of the bones by the use of silver wire. He agreed that the operation is a serious one and to be undertaken only under conditions pointed out by the author.

DR. JOHN B. ROBERTS believes that the operation is a good one, but that in the treatment of fractures there is needed an operation which the average man can do, so that it would not be necessary to send all patients to experts. With the proper sterilization of the parts, the needle and the thread, with the subcutaneous purse-string suture, a practical and satisfactory operation is offered. The periosteum falling between the fractured ends of the bone he gets rid of by rubbing the two parts together. This operation is so simple that it ought to take the place of the more serious ones which can only be undertaken under ideal conditions.

DR. WILLIAM L. RODMAN believes the subcutaneous operation more dangerous than the aseptic open method. The open operation should be surrounded with restrictions in old subjects and in patients with visceral disease and confined to young men leading active lives. He does not believe that the soft structures falling between the ends of the bones can be eliminated, except by the open operation. He agrees with Dr. Gibbon in the advantage of the curvilinear incision. He does not approve of the use of buried silver wire, and has come to regard wiring the bone as being unnecessary. He prefers to wait for the subsidence of the acute inflammatory symptoms before operating.

DR. A. C. WOOD agreed with Dr. Gibbon in practically all he said. He believes that modern surgery tends more and more to get away from subcutaneous operations. A man who can not be trusted to open a joint can not be trusted to pass a subcutaneous ligature. He makes the incision above the patella through a part of the skin which is thick and on which there is no pressure. This also favors drainage. He still unites the bone, as well as the capsule and ligaments, though the method employed is a modification of that formerly practiced. When the parts are brought together, the knot is at a point where there is no pressure.

Severe General Infection of Obscure Origin.

DR. H. B. ALLYN reported two cases of severe general infection. The first patient, a boy, 4 years old, complained of abdominal pain, had vomiting and delirium, and died on the third day of a sudden, large, pleural hemorrhage. At autopsy pure cultures of an undescribed form of colon bacillus were obtained from the spleen and an enlarged mesenteric gland, and the same organism was found in the culture made from an enlarged Peyer's patch. The disease was not hemorrhagic typhoid. The second patient, a boy, 9 months old, developed, in succession, a small patch of consolidated lung, vomiting, purpura, otitis media, arthritis, bronchitis, nephritis, meningitis, and died after an illness of twenty-five days. There was no autopsy. Cultures made from the throat mucus and the spinal fluid showed only a small diplococcus, which was not that of pneumonia or cerebrospinal meningitis.

A New Method of Surgical Anesthesia.

DR. W. WAYNE BABCOCK called attention to the fact that the mandragora used by surgeons from the time of Herodotus until the thirteenth century contained scopolamin, which has now, after the lapse of seven centuries, been re-introduced into surgical practice. Babcock has experimented with a number of solonaceous and hypnotic alkaloids, and finds that apomorphin is the most powerful adjuvant in scopolamin-morphin narcosis. When aided by apomorphin, over 70 per cent. of the patients have been successfully narcotized, while previous writers have only succeeded in narcotizing from 9 to 26 per cent. of their patients, the remainder requiring ether or chloroform. The method is as follows: One-sixth gr. of morphin sulphate, with 1/100 gr. of scopolamin hydrobromate, is given one hour before the operation, followed by an edema containing spiritus ætheris comp., ½ oz.; spiritus fermenti, ½ oz.; warm water, 4 ozs. Fifteen minutes later the hypodermic is repeated, and twenty minutes after the second hypodermic, a third containing 1/100 gr. of scopolamin, with 1/30 to 1/12 gr. of apomorphin hydrochlorate, is given. The dose of apomorphin is regulated by the condition of the patient and the strength of the pulse, and is usually followed in from three to ten minutes by surgical anesthesia. If the patient shows a tolerance for drugs, the apomorphin, at times associated with morphin, is repeated in a dose proportionate to the patient's condition. In a small per-

centage of cases which prove rebellious to the narcotic, it might be desirable to administer cautiously a minute quantity of ether or chloroform rather than to repeat the injection of the narcotics. The anesthesia produced, as a rule, lasts two or more hours, and the patient usually is in better condition toward the end of the operation than near the beginning. The method has been used successfully as the sole anesthetic in operations on the skull, face, larynx, gall bladder, stomach, kidneys, pelvic organs and extremities, and Babcock thinks it has a special field in operations involving the upper respiratory tract.

Notes on General Anesthetics, with Special Reference to Scopolamin-Morphin Anesthesia.

Dr. A. C. Wood's paper corresponded closely with Dr. Babcock's. His experience regarding the time required for full anesthesia differed somewhat from that of Dr. Babcock. The real difference is not so much due to the idiosyncrasy of the patient as to the question of a reliable and uniform preparation of the drug. The contraindications for administration are of more importance than the indications. This form of anesthesia might be used in any case in which there are no contraindications, provided absolute muscular relaxation is not essential. It is a satisfactory adjuvant to ether and chloroform. He would hesitate to use it in operations involving the mouth and air passages, fearing that with the profound narcosis sometimes produced the patient could not take care of the mucus or blood in the mouth. In 15 cases in which he has used it, the success might be considered perfect in 8. In one appendectomy there was no movement of the muscles, no nausea, and the convalescence was satisfactory in every way. He believes that the results in the use of the anesthetic would be better in proportion with the greater care exercised in its selection and administration.

DISCUSSION.

Dr. William L. Rodman's experience with this form of anesthetic was limited to one case, and that one case enabled him to confirm what had been said by the two essayists. While the anesthesia was not complete, it was made so by a very small quantity of ether. He thought that it could only be looked on as an adjuvant to ether and chloroform. He thinks it might be of much value in operations on the genito-urinary tract. He thinks all surgeons are remiss in not more fully availing themselves of the use of nitrous oxid preceding the administration of ether.

Dr. Ernest Laplace has used scopolamin-morphin a few times, and, while the effects are encouraging, he has not dared go as far as indicated by the papers read. He stated, however, that, with ether as a concomitant, there have been but very few subsequent unpleasant symptoms.

Dr. Alice M. Seabrooke referred to three cases at the Woman's Hospital in which scopolamin-morphin had been used with success. One was a case of carcinoma of the omentum, one a hysterical child, and the third case that of an aged woman with gallstones.

Dr. H. C. Wood thinks morphin anesthesia a better term than scopolamin-morphin. The question of the introduction of a new anesthetic depends on its comparative safety. The number of cases in the present issue is so small that no absolute deductions can be drawn. It has been demonstrated that the administration of morphin preceding ether lessens many of the unpleasant sensations produced by ether, but it depresses respiration. Nitrous oxid gas is a much better drug to precede ether.

Dr. John B. Roberts said that if scopolamin is identical with hyoscin he can not understand the necessity for such small doses as had been indicated.

Regular Meeting, held Sept. 13, 1905.

The President, Dr. J. M. Anders, in the Chair.

Anorexia in Infants in Hot Weather.

Dr. Maurice Ostheimer called attention to this condition, in which often the only symptom is the refusal of the child to take the proper amount of nourishment. To find cause for this loss of appetite, when there are no symptoms, he said is difficult, and there must be considered the possibility of functional derangement of the gastrointestinal tract. In one case an increase of the proteids in the milk mixture up to 2 per cent. helped the child, but only after two months did the child take more food at each feeding. In some cases he stops all food and gives barley water and whey. He especially called attention to the fact that anorexia occurs only during hot weather and that often it is cured only by removal to a cooler climate.

Rest in Tuberculosis.

Dr. William B. Stanton considered the treatment of tuberculosis under the heads of: 1, Abundant food; 2, fresh air; 3, regulation of the exercise. He pointed out the danger incident to injudicious exercise. The amount of exercise to be taken, he said, depended on temperature, pulse rate, respiratory rate, degree of emaciation, existence of complications in heart, kidneys, bladder, intestines etc. Constant temperature above 100 degrees or elevations to this extent in usually afebrile cases, call for absolute rest in bed. Remittent temperature when above 101 in the afternoon, also indicates rest. If the temperature is only 100 the patient may be allowed up, and exercise may be begun when the temperature is below 100 degrees. A pulse rate of 120 in the morning indicates rest. With a pulse rate of 110 or under the patient may sit up, and exercise may be begun when the pulse rate falls below 100 when resting. Breathing rate, he said depends usually on the degree of involvement and the competency of the heart. Marked emaciation contraindicates exercise, even if other signs are favorable. Rest should be insisted on until a satisfactory gain in weight is obtained. The complicating disease should decide the amount of exercise, bearing in mind that rest is even more necessary where two depressing influences are present. He recommended walking as the best and most easily regulated form of exercise. The gait should be slow, and at first the walking should be done only on level ground.

Suppression of Criminal Abortion.

The committee—consisting of Drs. Francis M. Perkins, Charles W. Burr and Henry W. Cattell—appointed by the society to aid in the prosecution of criminal abortionists, reported that thirty cases had been investigated and that each of the thirty persons had either left the city, was under police surveillance, was a fugitive from justice, was awaiting trial, or was in prison. As an additional example of results, it was stated that the Sunday edition of one of the newspapers, formerly carrying from ten to seventeen advertisements of criminal abortionists, no longer printed such material. The hope was expressed that the matter would be taken up by the state society and the American Medical Association. The report has been published in The Journal, Oct. 7, 1905, page 1095.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Asthma.

Kohn, in the *Med. Record*, after a thorough discussion of the disease and its causation, divides the regular methods of treatment into these nine classes: climatic, hygienic, symptomatic, gymnastic, psychic, hydrotherapeutic, medicinal, operative, institutional.

(1) *Climate.*—As a rule, a high altitude relieves asthmatic paroxysms; e. g., there is no doubt that on the high plateaus of New Mexico and Colorado these patients can live comfortably. A small minority of patients seem to get the most relief from the moist air prevailing at the sea shore. Again, some patients are benefited by removal from the city to the suburbs, and others have gained the most relief by removal from the country to the crowded city. An ocean trip has been known entirely to suspend paroxysms in some cases.

(2) *Hygiene.*—This treatment consists in seeing that the functions of the skin and excretory organs are regularly performed; in regulating the metabolic functions; in modifying

the diet according to indications; forbidding overindulgence in food and drink, especially at night, and in interdicting all liquors, heavy wines and champagne. Light alkaline mineral waters like those of Saratoga, and seltzer, vichy, should be used in moderation to keep the renal functions active. The baths of Saratoga or the Virginia Hot Springs, or in Europe those of Kissingen and of Marienbad, are to be recommended.

(3) *Symptomatic Treatment.*—This consists in the indications in each individual case as, for example, in a patient with rheumatic symptoms, we should use the salicylates; in the gouty, colchicum; in the anemic, iron, arsenic, the glycerophosphates, etc.; in those of a marked nervous or hysterical disposition, valerian or the valerianates. Uterine, cardiac, renal, traumatic or other cases should be treated accordingly.

(4) *Gymnastics.—The gymnastic* and *respiratory*, also the pneumatic cabinet and compressed air treatments, have met with considerable favor in Germany, and are best adapted for cases of bronchial asthma in which some lung dilatation has already taken place. The object sought is to prolong expiration. Simple calisthenic exercises and walking long distances in the fresh air have afforded much relief. It is further advocated that the patient be treated by exercises in breathing, which consist in counting slowly during each expiration for five minutes morning and evening. The next day count six, the following day seven, and so on until twenty is counted with each expiration; finally ten minutes mornings and evenings should be consumed in this way.

(5) *Psychic Treatment.*—Brugelmann lays much stress on the value of what he calls "education asthmatique," that is, enlightening the patient on the nature of his disease, and teaching him that by an effort of the will, asthma can be considerably ameliorated, and showing him the necessity of leading a perfectly well regulated life; the importance of proper diet, sufficient sleep, outdoor exercises, principally walking long distances or horseback riding, breathing exercises with inspiration as deep as possible; and of keeping the function of the skin and bowels regulated. There can be no question but that autosuggestion plays a most important rôle in the cure of the disease, as it does in its production.

(6) *Hydrotherapy.*—This is of undoubted value in the treatment of selected cases, especially those of a purely neurotic character without bronchitis; but this method of treatment should be used with great care, because of the sensitive peripheral nerves of these patients and their great reflex irritability. The lukewarm shower daily is recommended, followed by friction with warm towels; douching of the nape of the neck with cool water; when patients can not stand the shower, the lukewarm pack for three or four hours at a time every day, may be tried.

(7) *Medicinal Treatment.*—(a) During the attacks the following narcotics and analgesics may be given to abate it: Opium, morphin, chloral, bromid and phenacetin. In using morphin care must be taken not to establish the habit. Touching the pharynx with a mild solution of ammonia has cut short the asthmatic paroxysm in some cases. A hypodermic of 1/150 of a grain of atropin, the inhalation of a few drops of ether or chloroform, or the burning of stramonium and saltpeter powder, producing a dense smoke, have each been used with success in many cases. Nitrite of sodium, in doses of 2 or 3 grains hourly, has been used with effect, as also the inhalation of a few drops of nitrite of amyl. In some cases the inhalation of pure oxygen gas has proved very beneficial. (b) Between attacks the treatment by drugs varies according to the individual case and its etiology. Generally speaking, however, the preparations of iodin have the most supporters. The author recommends from his own experience the use of iodid of potassium, begining with 1 grain given in milk three times a day. This dose should be increased daily until the patient takes from 25 to 30 grains a day. It should be noted carefully whether or not the patient bears the drug well. The action of the drug consists in stimulating gland secretion and in lowering arterial pressure. The iodid of sodium or iodid of strontium may be tried when iodid of potassium is not well borne. Atropin has had innumerable advocates as a remedy for asthma; it should be given in increasing doses during the course of disease, as high as from 1/6 to 1/8 grain being given during the twenty-four hours. The other drugs recommended in the treatment are arsenic given in gradually increasing doses, nitroglycerin, quinin, belladonna, iron, strychnin and the other tonics.

The following prescription is recommended for the cough:

℞.	Tinctura lobeliæ.....m. x	.06
	Heroin hydrochloratis.....gr. 1/24-1/12	.0027-.0054
	Ammon. muriatis.....gr. v	.03
	Spiritus ætheris comp. q. s. ad.....℥i	4

M. Sig.: Give this amount at one dose.

Other remedies which have been found of value in the treatment of this condition are 1/1000 solution of adrenalin, which may be given hypodermically in doses of from 3 to 6 minims. Because of the anemic condition of the mucous membranes of the larynx and trachea it has been advised to give large doses of the nitrites.

(8) *Operative Treatment.*—Exaggerated claims have been made for the relief obtained in asthma by operations directed to the nasal passages. It is sufficient to say that the nares should be carefully examined and all growths removed, deformities corrected and hypertrophies reduced.

(9) *Institutional Treatment.*—In Germany this has many advocates; it is claimed that in a sanatorium for asthma, equipped with all the necessary aids to diagnosis and treatment, such as baths, pneumatic cabinets, compressed-air apparatus, gymnastic and electric appliances, and all other necessary instruments of precision, the best results can be achieved, especially when to all of these means is added the constant supervision by physicians who thoroughly understand the disease and its causation. The moral or psychic effect on an asthmatic on entering such a sanatorium with its ironclad rules and regulations and its systematized treatment is excellent; the knowledge that he is under the care of physicians, expert in the treatment of his disease, is in itself apt to have a very salutary effect. In this way autosuggestion plays a great rôle in relieving the patient of his sufferings; and if there is one recommendation that I would make, as a result of my studies on the subject, says Kohn, it is that just as we have sanatoria for nervous diseases or diseases of women, there should be such an institution created for the treatment of this most obstinate and baffling disease.

Medicolegal

Regulation of Employment of Expert Witnesses.

No. 175 of the Public Acts of Michigan of 1905 provides that no expert witness shall be paid or receive as compensation in any given case, for his services as such, a sum in excess of the ordinary witness fees provided by law, unless the court before whom such witness is to appear or has appeared awards a larger sum; and any such witness who shall directly or indirectly receive a larger amount than such award, and any person who shall pay such witness a larger sum than such award, shall be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding $1,000, or by imprisonment in the county jail not to exceed one year, or both, in the discretion of the court, and may further be punished for contempt.

No more than three experts shall be allowed to testify on either side as to the same issue in any given case, except in criminal prosecutions for homicide; provided, the court trying such case may in its discretion permit an additional number of witnesses to testify as experts.

In criminal cases for homicide where the issues involve expert knowledge or opinion the court shall appoint one or more suitable disinterested persons, not exceeding three, to investigate such issues and testify at the trial; and the compensation of such person or persons shall be fixed by the court and paid by the county where indictment was found, and the fact that such witness or witnesses have been so appointed shall be made known to the jury. This provision shall not preclude either prosecution or defense from using other expert witnesses at the trial.

This act shall not be applicable to witnesses testifying to the established facts or deductions of science, nor to any other specific facts, but only to witnesses testifying to matters of opinion.

To Promote Anatomic Knowledge.

Chapter 134 of the Laws of North Dakota of 1905 provides that superintendents of penitentiaries, hospitals, insane asylums and poor houses, coroners, sheriffs, jailors, city and county undertakers, and all other state, county, town and city officials who shall have custody of any body, of any deceased person required to be buried at public expense, shall give permission to any physician or surgeon who is a licentiate of the state board of medical examiners, or to any medical school or college, public or private, of any city, town or county within this state, on his or their request therefor, to receive and remove free of charge or expense, after having given proper notice to the relatives or guardians of the deceased, the bodies of such deceased persons to be buried at public expense, to be by him or them used within the state for advancement of anatomic knowledge and medical science, preference being given to medical colleges or schools, public or private; such bodies to be distributed to and among the same equitably; the number assigned to each being in proportion to the students of each college or school; provided, however, that if any person claiming to be, and satisfying the proper authorities that he is of kindred of the deceased, shall ask to have, within thirty-six hours after death, the body for burial, it shall be surrendered for interment; and provided, further, that any medical college or school, public or private, or any officers of the same that shall receive the bodies of deceased persons for the purpose of scientific study under this act, shall furnish the same to students of medicine and surgery who may be under their instruction.

Any physician or surgeon who is a licentiate of the state board of medical examiners, or any medical college or school, public or private, before receiving any dead body or bodies, shall give to the proper authorities, surrendering to him or them a sufficient bond that said bodies shall be used only for the promotion of medical science within this state; and whoever shall use such dead body or bodies for any other purpose, or shall remove the same beyond the limits of this state, and whoever shall buy or sell any such bodies or body, or shall traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction thereof, be fined in the sum of $100, and any officer refusing to deliver the remains or body of any deceased person, when demanded under the provisions of this act, shall be guilty of a misdemeanor and shall pay a fine of not less than $50.

It shall be the duty of preceptors, professors and teachers, and all officers of medical colleges and schools, public and private, and all others who shall receive any dead body or bodies in pursuance of the provisions of this act, decently to bury in some public cemetery or to cremate the same in a furnace properly constructed for that purpose, after the bodies shall have answered the purposes aforesaid, and for any neglect or violations of the provisions of this act the party or parties so neglecting shall be guilty of a misdemeanor, and on conviction shall pay a penalty of $100.

Pure Drug Law.

Chapter 10 of the Laws of North Dakota of 1905 provides, under penalty, that it shall be unlawful for any person, his agent or servant, or while acting as agent or servant of any other person or corporation, to manufacture for sale, offer for sale, or sell within this state any drug which is adulterated within the meaning of this act. The term "drug" as used in this act shall include all medicines for internal and external use, antiseptics, disinfectants and cosmetics.

A drug shall be deemed to be adulterated: First—If, when sold under or by a name recognized in the United States Pharmacopeia, it differs from the standard of strength, quality or purity prescribed therein, unless the order therefor requires an article inferior to such standard, or unless such difference is made known or so appears to the purchaser at the time of the sale. Second—If, when sold under or by a name not recognized in the United States Pharmacopeia, but which is found in some other pharmacopeia or other standard work on materia medica, it differs materially from the standard of strength, quality or purity prescribed in such work. Third—If its strength, quality or purity falls below the professed standard under which it is sold; provided, that a drug or medicine shall not be deemed adulterated in the following case: If the standard of strength or purity of any drug has been raised since the issue of the last edition of the United States Pharmacopeia, no prosecution relative to it shall be maintained until such change of standard has been published throughout the commonwealth.

Every proprietary product, drug, medicine or beverage containing more than 5 per cent. of ethyl alcohol, or which contains chloral hydrate, ergot, morphin, opium or any of their compounds or derivatives, cocain or any of its salts, bromin, iodin or any of their salts, shall be clearly labeled in black open gothic letters, printed on a white background, showing the name and percentage of each of the foregoing constituents, and said label shall be affixed to each and every package, carton, box or bottle in such a way as to be clearly seen.

No sale or gift of cocain or of its salts shall be made, or delivery thereof made in this state, except on the written prescription of a licensed physician.

It shall be unlawful to sell, offer or expose for sale, or have in possession any preparation or product, intended for the use of man, either for internal or external purposes, which contains methyl alcohol or "wood spirits."

Nothing in this act shall be so construed as to in any way interfere with the written prescription of any regularly licensed physician or with the filling of the same by a licensed druggist.

The North Dakota government agricultural experiment station shall make analysis of drugs and medicines found on sale in North Dakota suspected of being adulterated, at such times and places, and to such extent as it may determine, and may appoint such agent or agents as it may deem necessary for the enforcement of the provisions of this act, and such agent or agents shall have free access and egress, at all reasonable hours, for the purpose of examining into any place wherein it is suspected any drug or medicine adulterated with any deleterious or foreign ingredient or which falls below the standard of purity or where such ingredients exist, and such agent or agents, on tendering the market price of said article, may take from any person, firm or corporation samples of any articles suspected of being adulterated as aforesaid. Whenever said station shall find, by its analysis, that adulterated drugs have been on sale in this state, or that said drugs are in violation of this act, it shall forthwith transmit the facts so found to the attorney general and the state's attorney of the county in which said adulterated product was found.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

November 11.

1 *Notes on Anesthetics, with Special Reference to Scopolamin-Morphin Anesthesia. A. C. Wood, Philadelphia.
2 *Importance of a Study of Nutrition. R. H. Chittenden, New Haven, Conn.
3 *Distinctive Features of Animal and Vegetable Dietaries. L. B. Mendel, New Haven, Conn.
4 Pathology and Etiology of Human Vaccinia. W. T. Howard, Jr., Cleveland, Ohio.
5 *Clinical Study of the Freezing-Point of Blood and Urine in Various Diseases. T. Tieken, Chicago.
6 Value of Paraldehyde in the Treatment of Insomnia. J. S. Christison, Chicago.

1. **Scopolamin-Morphin Anesthesia.**—Wood epitomizes his personal experience with scopolamin-morphin anesthesia as follows: It is capable, in many cases, of producing a satisfactory surgical narcosis lasting several hours. When successful, the patient avoids the anxiety or even alarm often felt before taking ether, and the nausea, vomiting, and depression following its administration. If it should partly or wholly fail to anesthetize the patient, the surgeon may use

ether or chloroform, with the assurance that the effect will be more prompt and satisfactory than when either is administered alone. When used in conjunction with ether or chloroform, it has been especially satisfactory. The time required to induce anesthesia was lessened, relaxation promoted, the secretion of mucus in the respiratory tract prevented, and, what is very important, the quantity of anesthetic required was greatly reduced. To induce full anesthesia in the average healthy adult, Wood recommends 0.0006 gm. (1/100 gr.) scopolamin and 0.01 gm. (1/6 gr.) morphin, to be given hypodermically two or two and a half hours before operation, and a second similar dose an hour later. If the anesthesia is not sufficiently complete half an hour before operation, a third dose may be given. This may be the same as the two previous doses, or may consist of either drug alone, or of scopolamin in conjunction with apomorphin, according to the special indications present. The doses should be considerably reduced in children, feeble patients, and in advanced age. None of Wood's patients remembered feeling any pain, or any other detail of the operation, although in some instances the patient gave evidences of the presence of sensation at the time. This preparation is contraindicated in acute affections of the pharynx and larynx; in operations involving the mouth or air passages; in edema of the lungs, and in cases in which capillary hemorrhage may be a troublesome factor. As both scopolamin and morphin are powerful drugs, prudence demands that they be used with caution. In addition to the caution mentioned, the safety and success of the method depend on having pure and reliable drugs, accurate dosage, and perfectly fresh solutions.

2. Importance of Study of Nutrition.—Chittenden says that physicians should have a full and complete knowledge of the various processes of nutrition so that they may be able to correct those deviations from the normal which are characterized as disease. There can be no exaggeration in emphasizing the importance of the daily diet in the maintenance of health and in the establishment of a proper and normal condition of nutrition. Prevention is better than cure, and, says Chittenden, we may well ask whether, with a proper understanding of the true laws of nutrition, of the real needs of the body for food, with a clear conception of the processes of digestion, secretion, absorption, peristalsis, circulation, and excretion, we should not be in a better condition to combat disease than we now are. In his opinion, two, at least, of the dread diseases of mankind, namely, cancer and tuberculosis, are possibly connected with a disturbance of nutrition in which, perhaps, the predisposing causes are to be found in an excess of nutritive material, in general, in the blood, or to a disturbance in the balance of nutritive materials between the circulating medium or possibly in the tissues themselves. Chittenden believes that there is much of value to be learned in a study of the minimum quantities of food required to maintain health and strength, because the real needs of the body for food are unquestionably very much below the amount ordinarily consumed, and, this being true, is it not possible that this excess of food, for which the body has no physiologic need, in the long run imperils the health of the individual, diminishes the ordinary powers of resistance, and so paves the way for various forms of disordered nutrition spoken of as disease.

3. Animal and Vegetable Dietaries.—Mendel contrasts the relative values of animal and vegetable dietaries. He says that vegetarianism undoubtedly has its place in ameliorating various functional disorders. In the treatment of obesity, certain forms of neuralgia of unknown origin, and of gout in many instances, the strict diet renders effective aid. In estimating food values, not only the composition of the food, but also the degree of its utilization in the alimentary tract must be considered. No exclusive system of diet deserves defense on scientific ground.

5. Study of Freezing Point of Blood and Urine.—Tieken reports the results of his observations of the freezing point of blood and urine in surgical diseases of the kidneys and of the urinary tract. His conclusions regarding the value of cryoscopic examination of the blood and urine in surgical diseases of the kidneys coincide with those of Kümmel, Rumpel and others, namely, that it is of value in this class of cases, because it shows whether or not the remaining organ is competent. In diabetes mellitus, of a severe type, he usually finds a concentration of both the blood and urine, but the percentage of sugar in the urine bears no constant relationship to the freezing point, as claimed by some recent writers. He was unable to demonstrate a molecular concentration of the blood in abdominal tumors not of renal origin, unless great pressure was exerted, disturbing the renal function. Tieken thinks that cryoscopy, when employed with a thorough understanding of its limitations and possibilities, may be of conceivable value to both the physician and surgeon, as a diagnostic and prognostic aid, in certain pathologic conditions.

Medical News, New York.

November 11.

7 *Sea-Air Treatment of Tuberculosis of the Bones and Glands in Children. J. W. Brannan, New York.
8 *The Influence of Climate in Pulmonary Tuberculosis. C. L. Minor, E. R. Baldwin, S. E. Solly, C. F. McGahan and others.
9 Case of Spinal Apoplexy with Findings. W. Browning and F. Tilney, Brooklyn, N. Y.
10 Thrombosis of the Receptaculum Chyli and Chylous Ascites as a Complication of Cirrhosis of the Liver. H. J. Nichols, Washington, D. C.
11. Strictures of the Urethra; Their Pathology and Treatment. E. C. Ballenger, Atlanta, Ga.
12 Treatment of Tuberculosis. I. H. Hance, Lakewood, N. J.

7. Sea Air Treatment of Tuberculosis in Children.—Brannan details the excellent results achieved in the treatment of children suffering from tuberculosis of the bones and glands at the Summer Home on Coney Island.

8. Influence of Climate in Pulmonary Tuberculosis.—This committee states that if we look for the causes of the tendency to doubt the value of climate in the treatment of tuberculosis they are to be found, first, in the unskillful use in the past of climate as a therapeutic measure; second, in the formerly widely spread belief in a mysterious specific influence of climate which led to a superstitious faith in its unaided powers and, therefore, to a neglect of those even more important matters, hygiene, diet, instruction and detailed supervision; third, in a lack of appreciation of what the climate has been doing for them all the time. Realizing, then, as we now do, that the very first aim in the treatment of tuberculosis is and must always remain the raising of the vitality of the patient's system until it is able itself to conquer its disease, we see that the beneficial effect of climate depends on its wonderful power in vitalizing the system, on its beneficial effects on metabolism, on its awakening of dormant or waning natural powers. No advanced workers in this line would to-day, as was formerly done, place climate first in the order of therapeutic measures. Let it never be forgotten that hygiene, diet, teaching and supervision must always come first, but, granted that they are properly attended to, then enters the powerful rôle of climate, reinforcing and accentuating the effects of these other measures, and yielding results that can not be approached even with the same care and watching and food in less favorable localities. The elements in climate which have a beneficial influence are, in the order of their importance, (1) an abundance of chemically and bacteriologically pure fresh air; (2) sunshine; (3) coolness, or, in a certain number of cases, warmth; (4) dryness, or, in a few cases, a moderate degree of humidity; (5) altitude; (6) wind to which the patient is not directly subjected, provided vegetation is sufficient to prevent dust storms, is beneficial; (7) equability; (8) proper soil. Brannan says that a climatic resort should be looked on as a university to which the patient goes to get under proper conditions that discipline and instruction which he will bring back with him into his daily life at home, where he should serve as a teacher of those with whom he is thrown. The physician in a climatic resort will be of use to his patient in proportion as he is able to be a forceful and stimulating teacher.

Medical Record, New York.

November 11.

13 *Notes on Non-operative Gynecology. S. J. McNutt New York and Albany.
14 *Non Gonorrheal Urethritis. H. G. Spooner, New York.
15 *The Stomach in Pulmonary Tuberculosis, and the Effect of Gastric Juice on the Bacillus Tuberculosis. E. Fuller, New York.
16 *Treatment of Perforations of the Tympanic Membrane with Especial Reference to the Use of Gutta-Percha Tissue. D. G. Yates, New York.
17 Transverse Incision in Abdominal Operations. A. E. Rockey, Portland, Ore.

13. **Non-operative Gynecology.**—McNutt maintains that in many instances a woman with pelvic or abdominal disease may recover under medical treatment only, without operation. The cases calling most urgently for operative treatment are those of pelvic or abdominal tumor, the accidents of childbirth, malignant disease, and pus collections. In order to deal successfully with the non-operative cases it must be remembered that many of the symptoms present are reflex in origin. Hence, the treatment must be general as well as local. The most frequent general symptoms are the derangements of secretion and excretion, anemia and nervous symptoms. The most frequent local conditions are (1) displacements of the uterus, with or without displacements of the adnexa; (2) catarrhs, acute, subacute, and chronic, confined to the uterus; (3) the same, with extension to the tubes and secondary involvement of the ovaries. In many cases one can use local treatment indefinitely and utterly fail to cure the patient if with it does not go general medication and hygiene. This includes diet, clothing (few women dress properly), and carefully regulated out-of-door life, with some interest to divert the mind from introspection.

14. **Non-gonorrheal Urethritis.**—In view of the fact that the causes contributing to the production of urethritis are so numerous as to be beyond comprehension, Spooner prefers a classification based on the clinical conditions in which cases of non-gonorrheal urethritis have been observed. He suggests the following classification: (1) Urethritis caused by external irritation: Coitus, catheterism, ungratified erections (?) masturbation (?), medicated injections. (2) Urethritis caused by internal irritation, mechanical, chemical, and tonic, of constitutional origin: Food, drinks, drugs, gout (?), rheumatism (?), arthritic diathesis (?), diabetes (?), herpes, mumps (?), syphilis (?), tuberculosis, typhoid fever (?). From the clinical point of view differential diagnosis is impossible, but, as a rule, in non-gonorrheal urethritis the incubation period and the course are shorter and less painful than in the specific form. Non-gonorrheal urethritis of constitutional origin must be treated so as to remove the exciting cause. When due to pyogenic bacteria the treatment is the same as in gonorrheal urethritis. Some cases of aseptic urethritis of unknown origin are not influenced by any form of treatment.

15. **The Stomach in Pulmonary Tuberculosis.**—Palier has studied the gastric conditions present in a number of cases of pulmonary tuberculosis, most of the patients being men between the ages of 22 and 45. He describes several of these, and says that his observations lead him to believe that in about 60 per cent. of the cases of incipient consumption there is hyperchlorhydria, in 20 per cent. the stomach is about normal, and in about 20 per cent. there is hypochlorhydria. The diet, therefore, must vary in different cases of the disease, and it is necessary to study the condition of the patient's stomach before it is possible to lay down rules for his nutrition. The stomach tube is not likely to do harm if carefully used. The effect of gastric juice in the tubercle bacilli in the sputum swallowed was also investigated. It appears that the normal gastric juice is bacteriolytic to the tubercle bacilli, but *in vitro* the process is very slow. The author believes, however, that in the stomach it is much more active, so that ordinarily no bacilli can pass the normal stomach and reach the intestine in virulent condition. In hypochlorhydria they undoubtedly can, and also under any conditions on repeated ingestion some may find opportunities to slip through and to cause disease. The frequency of hyperchlorhydria with hypersecretion in pulmonary tuberculosis, the author believes, explains the frequency of gastric ulcer in this disease.

16. **Treatment of Perforations of the Tympanum.**—Yates recommends the use of patches of rubber to be applied over the perforation, so as to make an air-tight joint, in the treatment of recent or long-standing cases of this injury. In applying a patch to the drum a piece of rubber is selected, which is about twice the size of the hole to be covered. The canal and drum are thoroughly sterilized by syringing and mopping, and dried. If necessary, the edges of the perforation are pared or touched with nitrate of silver. The disc is carried into the drum by means of forceps or a cotton-tipped probe through a speculum, if small, without it if too large. It is then pushed into position and the edges pressed down firmly all around. No adhesive material is necessary. The rubber is most conveniently sterilized by keeping it in alcohol or other antiseptic for a few moments while other preparations are being made. The patch hastens the reparative process and at the same time effects an immediate improvement in the hearing. Yates sums up the advantages of rubber tissue used in this way as follows: (1) It is convenient, easily sterilized and applied. (2) It is flexible, remains in place for a long time, and requires no adhesive material. (3) In large perforations it has the advantage over the various forms of artificial ear drums in not causing pain or irritation or setting up a discharge. It helps to heal at the same time that hearing is being improved. (4) Healing is rapid and the formation of scar tissue, which is likely later to give way or to become the seat of calcareous deposits, is reduced to a minimum.

Boston Medical and Surgical Journal.

November 9.

18 *President's Address Before the American Hospital Superintendent's Association. G. H. M. Rowe, Boston.
19 *Observations on the Comparative Value of Different Methods of Applying Plaster Jackets in Spinal Caries. H. G. Brackett and L. R. G. Crandon, Boston.
20 *Treatment of Chronic Prostatic Enlargement. J. P. Lewis, Boston.

18. **American Hospitals.**—In this address Rowe details much of interest to hospital superintendents, as well as to the general profession. According to his statistics, New York has the largest number of public hospitals; Pennsylvania is second; Illinois third; Massachusetts fourth, and California fifth. Nevada is the only state which has no hospital, either public, private or ecclesiastical. New York also leads in the number of private or corporation hospitals. Illinois leads in the number of ecclesiastical hospitals. Of the total number of hospitals in this country, 220 are public, 442 are ecclesiastical and 831 are private institutions. Training schools for nurses are maintained by 867 hospitals. The ratio of training schools among the states is much the same as the number of hospitals. Oklahoma is the only state or territory that has no training school for nurses. The number of patients treated during the year was 1,064,512, 20 per cent. of these entering the hospitals of the State of New York; Pennsylvania comes next with 10 per cent., Illinois with 8 per cent., and Massachusetts with 4 per cent. Rowe believes that if large hospitals must increase their bed capacity it should be done by establishing branch hospitals somewhere outside the crowded city, but easy of access. The branch hospital should be used for emergency work and the main hospital for the treatment of general cases. He also advocated better utilization of the hospital for teaching purposes.

19. **Value of Plaster Jackets.**—Brackett and Crandon record the results of their observations made for the purpose of comparing the various methods of applying plaster jackets with reference to their use in various regions of the spine; to ascertain whether or not there resulted any attendant evils, immediate or remote, from the attempt to obtain the greatest possible correction; to test the fork apparatus, and to determine a way of estimating the weight of the finished jacket at the time of its application, as well as the minimum weight for a durable jacket. They found that lumbar disease improves under any method, but with the balance in favor of the hammock. Dorsolumbar and dorsal disease shows a gradual increase by any method of extension that brings about a compensatory increase of the normal lumbar curve. In disease involving the fourth dorsal vertebra (high dorsal) the spine may be held erect by either form of dorsal support, provided the jacket is carried high in front. Care is necessary, however, to avoid postural defects. The ventral position is adapted for all cases of lumbar disease. It is also applicable to dorsal cases, in which the portion covering the anterior chest is left until the patient is removed from the hammock, and the jacket finished in the sitting posture, with the patient held back in the extended position. The dorsal position is adapted to disease in either the lumbar or dorsal regions, but particularly to the dorsal. The fork is rather the more applicable to the dorsolumbar and lower dorsal, and the rods to the higher dorsal cases. In the old cases with deformity care must be taken

to avoid lordosis. The control of this by the flexed thighs is more apparent than real. The poise or balance in the standing position after the application of the jacket is a valuable guide and should be taken into account. The most accurate way of estimating the weight of the finished jacket is by the weight of the rolls before wetting. The shrinkage in weight is equal to about 9 per cent. of the rolls before wetting. A jacket of about 1 pound 12-14 ounces should be sufficient for a child of from 3 to 5 years of age, and a jacket of 2 pounds 10 ounces' weight sufficient for a child of from 10 to 12 years.

20. **Treatment of Chronic Prostatic Enlargement.**—Lewis presents the following conclusions: 1. The use of sounds is generally to be condemned. 2. The sphere of usefulness of the catheter is growing smaller and smaller as the advantages of an early operation make themselves manifest. 3. The Bottini operation may be applicable in selected cases, but should seldom, if ever, be adopted. 4. Orchidectomy, vasectomy, ligation of the internal iliacs, injection of carbolic acid, application of electricity and allied methods, he says, are to be condemned. 5. Prostatectomy is the procedure of choice, best performed when the symptoms first make themselves manifest and the patient's condition is presumably at its best. 6. The preferable route is through the perineum, the preferable method that of Young or one of its modifications, but much depends on the skill of the operator in the method employed. 7. In patients with foul bladders and diseased kidneys who, we have reason to expect, would not stand an extensive operation, thorough drainage should first be instituted either by a suprapubic or perineal incision under local anesthesia, to be followed later by enucleation, if deemed advisable. 8. The use of local anesthesia, especially spinal cocainization, is of great value, and should be more extensively employed.

New York Medical Journal.

November 11.

21 Skiagraphic and Therapeutic Factors in Tuberculosis of the Bones and Joints, with Some Reference to the Iodoform Treatment. (To be continued.) C. Beck, New York.
22 Relation of Milk to Typhoid Fever in New York City. J. S. Billings, Jr., New York.
23 *Case of Puerperal Convulsions in which Cesarean Section was Required. F. T. Woodbury, U. S. A.
24 *Treatment of Leukemia and Pseudoleukemia by the Roentgen Rays. A. Holding and M. Warren, New York.
25 *Ocular Symptoms of Gout. K. E. Wheelock, Ft. Wayne, Ind.
26 Chronic Headache and Its Treatment by Massage. (Continued). G. Norstrom, New York.
27 *Talma's Operation. G. C. Stemen, Denver, Colo.

23. **Cesarean Section for Puerperal Convulsions.**—The indications for operation in this case, reported by Woodbury, were the urgent necessity of emptying the uterus of its living contents on account of puerperal convulsions with rigid os after two failures of delivery by forceps. Version was regarded as being contraindicated by the absence of amniotic fluid and the inertia of the uterine muscle. The section was performed after Saenger's method, and a living child was extracted. The uterus was closed with interrupted sutures of catgut prepared by the Claudius method; the peritoneum and fascia were brought together with continuous sutures of the same and the skin with interrupted sutures of silkworm gut. The patient rallied well from the operation, but on the seventh day the temperature rose rapidly, and in spite of all efforts she rapidly grew weaker and died in coma.

24. **Roentgen Ray in Leukemia.**—A study of the literature by Holding and Warren shows that 25 cases with splenomyelogenous leukemia treated by the *x*-rays have been reported; 15 were improved; in 2 cases there was no improvement or the cases terminated fatally. Second, 8 cases of patients with lymphatic leukemia treated by the *x*-rays have been reported; no patients were cured; three were improved; and in five cases there was either no improvement or a fatal termination. Third, 22 cases of patients with pseudo-leukemia similarly treated have been reported; 6 were symptomatically cured; 13 were improved, while in 3 cases the condition was either unimproved or the case terminated fatally. Two cases are reported by the authors, and attention is directed to the following points: First, the marked action which the *x*-rays have on the lymphatic system and blood-making organs; second, its palliative action in cases of leukemia and pseudoleukemia, and to suggest that in some cases even curative effects may be hoped for; third, further observation of the action of the *x*-rays in this class of diseases is recommended.

25. **Ocular Symptoms of Gout.**—Wheelock reports four cases in which the ocular evidence of gout was followed by local manifestations of undoubted character. The following tissues of the eye are known to be affected by gout: Iris, choroid, sclera, retina and lens. Among the conditions observed are the following: Iritis, plastic and serous; cyclitis, plastic and serous; choroiditis, retinitis, retrobulbar neuritis, scleritis and episcleritis; cataract; hemorrhagic retinitis and glaucoma. Wheelock has observed all these conditions, except involvement of the lens, and has felt certain that the origin was gouty, yet in many cases, the evidence followed the administration of colchicum and potassium iodid. He also recognized gout as the causative factor in several forms of keratitis.

27. **Successful Talma Operation.**—Stemen operated on his patient in November, 1904, employing the method advocated by Talma as nearly as possible. There have been no unfavorable symptoms since the operation. The patient has gained in weight; his nutrition is good and there has been no ascites nor any evidence of a return of the original condition.

Lancet-Clinic, Cincinnati, Ohio.

November 11.

28 Causation of Eclampsia. J. W. Rowe, Cincinnati.
29 Data Concerning Uterine Cancer. A. P. Cole, Cincinnati.

American Journal of Medical Sciences, Philadelphia.

October.

30 Surgical Intervention for the Intracranial Hemorrhages of the New-born. H. Cushing.
31 *Intestinal Perforation in Typhoid Fever in Early Life. J. P. Crozer Griffith, Philadelphia.
32 *Case of Acute Leukemia, with Some Striking Clinical Features. D. L. Edsall, Philadelphia.
33 *The Effect of Certain Diet Cures in Diabetes Mellitus. J. Friedenwald and J. Ruhrah, Baltimore.
34 Gangrene of the Tonsil. C. W. Richardson, Washington, D. C.
35 *Preventive and Remedial Treatment of Acute Rheumatic Endocarditis. H. Robinson, New York.
36 Chylous and Chyliform Effusions into the Serous Sac. J. G. Wilson, Philadelphia.
37 *Case of Metastatic Endothelioma. E. J. Wood, Wilmington, N. C.
38 Excretion of Acetone and Diacetic Acid in Vomiting of Pregnancy. H. Baldwin, New York City.
39 A Procedure for Opening the Pericardium. J. H. Bacon, Cleveland, Ohio.
40 *Permeability to Bacteria of Surgeons' Rubber Gloves. H. Fox and E. A. Schumann, Philadelphia.
41 Effect of Experimental Conditions on the Vascular Lesions Produced by Adrenalin. L. Loeb and T. C. Githens, Philadelphia.
42 *Brachial Birth Palsy. L. P. Clark, A. S. Taylor and T. P. Prout, New York.

31. See abstract in THE JOURNAL, June 3, 1905, page 1797.

32. Id. Page 1800.

33. **Effect of Diet Cures in Diabetes.**—Friedenwald and Ruhrah bring forward certain diet cures which have assumed some importance during the past few years, such as the milk cure, the potato cure, and the oatmeal cure. Their observations with the use of milk as a form of diet in diabetes are in accord with those of von Noorden. They have rarely found it advisable to place any of their patients on an exclusive milk diet, except in those severe cases of diabetes in which diacetic acid is present in the urine and in which the patient is threatened with the onset of diabetic coma or in which this condition had already set in. On the other hand, they have utilized from one-half to a liter of milk daily in many of their cases of diabetes in addition to other allowable foods, often with excellent result. They have never followed Moose's plan, that of replacing all carbohydrates by potatoes, but have rather followed the method suggested by von Noorden, that of replacing a portion of the bread by this form of food. A patient who is permitted to consume 100 grams of bread a day can take 300 grams of potatoes, so that at least a certain proportion of the bread can be replaced by this form of food. They have never seen the slightest harmful effect produced by the use of potatoes, even in severe forms of diabetes. In a not inconsiderable number of cases very beneficial results were obtained. The potato has an additional advantage, in that it lends variety in furnishing carbohydrate food as it can be prepared in various ways, and again as being a means to which fatty food, such as butter, can be furnished the body in large quantities. The oatmeal cure

was found especially useful in those forms of diabetes exhibiting diacetic acid in the urine. In the mild forms it is not only a useless treatment, but may even prove harmful. In the severe forms of diabetes remarkable results have been obtained with the oatmeal cure. The authors believe that these cures are valuable aids in the treatment of diabetes, but urge that great care must be practiced with the use of these various forms of diet. Each case must be studied individually and must be watched carefully in order to obtain the best results.

35. **Treatment of Acute Rheumatic Endocarditis.**—Robinson has found that no antirheumatic remedy is so useful and so free from objections as salicin. Salicin has been given in doses of 30 grains every hour for eight doses, and subsequently in 20 grain doses every two hours for one or several days, without occasioning appreciable accidents of any kind, and apparently with only relief to the patient's symptoms and general condition. It does not produce any headache or nausea. By the use of salicin the poison of rheumatism may be neutralized, the disease shortened, and thus there is less likelihood of having endocarditis appear. If the endocarditis exists already, it is advisable to continue the salicin to prevent further cardiac complications. In cases of subacute and chronic rheumatism, in which Robinson has given salicin many times in small or moderate doses, more or less frequently, he has repeatedly known symptoms to disappear completely or be much ameliorated in a few days or weeks, and without any intercurrent manifestations of an unfavorable nature which could be attributed to its use. Robinson cautions against interrupting the treatment too soon or reducing the amount of the drug too rapidly. In the case of children, when the heart becomes involved, Robinson has found it preferable to administer salicin, because it is a safer remedy than salicylate of soda.

37. **Case of Metastatic Endothelioma.**—Wood reports the case of a man, aged 43, whose family and personal history was negative, who four years ago noticed a small nodular mass on the surface of the right testicle. The testicle became painful and began to increase in size; it was firm in consistence and showed no sign of breaking down in any part of it. This condition gradually increased until the final removal of the testicle in the same year. Two years later the left testicle became similarly affected and was also removed. In both instances a diagnosis of sarcoma was made, which was confirmed microscopically. In 1904, following a fall, the patient began to complain of backache. This pain persisted with intervals of comparative freedom, followed by exacerbations which would necessitate remaining in bed several days at a time. During this time the man kept his full weight and showed no signs of cachexia. All the organs were normal, except the left kidney, which could not be palpated in its normal position. The provisional diagnosis was made of malignant disease of the left kidney. An exploratory incision revealed a kidney enlarged to about three times the normal size, and placed almost transversely across the abdomen. A nephrectomy being found impracticable, nothing more was done. A few days later the right leg was considerably edematous. It gave the patient some discomfort, though it was not acutely painful. The edema soon extended to the scrotum. Ten days after the operation the patient was seized with pain in the side and became cyanosed. He began to have a prune juice expectoration, developed a temperature, and finally became delirious. Twenty hours later he died with a large pulmonary hemorrhage. Tumors were found in the kidney, liver and lung. Microscopic examination showed these tumors to be endotheliomas. Wood concludes that the tumor of the testicle was unquestionably a large, round-cell sarcoma and that this was the original source of the disease. This being the case, and the metastatic tumors being of the endothelial variety, it may be taken as evidence that endothelioma is a sarcomatous tumor. It is notable in this case that the metastasis was exceedingly slow for a sarcoma, nearly five years elapsing from the time of invasion to death.

40. **Permeability of Rubber Gloves to Bacteria.**—Fox and Schumann selected at random from a lot purchased for hospital use six pairs of rubber gloves and subjected them to experiments which showed conclusively whether or not the rubber glove is an absolute safeguard against the implantation of bacteria from the hands of the surgeon to the field of operation. The results of these experiments were such as to justify the authors in arriving at the conclusion that rubber gloves are absolute barriers against wound infection by the hands of the surgeon in so far that they are absolutely bacteria proof. Any infection occurring must be introduced into the wound from some point not protected by a glove.

42. **Brachial Birth Palsy.**—Clark, Taylor and Prout's research embodies new facts in the etiology and pathology of the laceration type of birth palsy, the development of the relationship thereto of the symptomatology, and the establishment of a scientific basis for treatment. They found that the cause of the laceration type of birth palsy is tension on the nerve trunks, which first ruptures the nerve sheath and then the nerve fibers. The prevention of this serious lesion of the cervical nerve trunks rests with the obstetrician, who should not overstretch the child's neck in the process of delivery. The persistence of the palsy is clearly explained by the pathologic findings, viz.: (a) Rupture of the perineurial sheath with hemorrhage into its substance, resulting in the formation of hematomata or hematomatous infiltration into the neighboring tissues. (b) The cicatricial contraction following organization of the blood clot and repair of the rent in the perineurial sheath. The connective tissue thus formed indents and presses on the nerve bundles, strangulating them and preventing regeneration of the nerve fibers. In some instances the same result is accomplished by turning inward of the perineurial sheath on the nerve bundles. The nature of the lesion in all cases demands excision of the damaged areas and suture of the divided ends as soon as it is proved that spontaneous repair will not take place. The plan of treatment is then the same as that for peripheral nerve injuries elsewhere. In all cases, such treatment as will prevent contractures and deformities and maintain muscle tone in the paralyzed limb should be systematically used until either spontaneous recovery occurs or operation is done. (Traumatic neuritis is a contraindication to active treatment.) It is obvious that the above measures should be continued after operation. The proper time for surgical interference is not yet definitely fixed. It appears, however, to be much later than two or three months after birth. At the present time one year would seem to be a reasonable delay before operation.

Illinois Medical Journal, Springfield.

October.

43 Diseases of the Bile Tracts. C. E. Black, Jacksonville.
44 Surgery of the Duodenum. E. M. Sutton, Peoria.
45 *Surgery of the Stomach. A. D. Bevan, Chicago.
46 *Surgical Treatment of Bleeding Ulcer of the Stomach. C. Beck, Chicago.
47 Parenchymatous Keratitis, Irido-Choroidal Forms, with Loss of Both Eyes. C. H. Brobst, Peoria.
48 *Climatic Treatment of Tuberculosis, with Special Reference to Colorado. C. L. Wheaton, Chicago.
49 *Insanity Following Skull Injuries. E. Mammen, Bloomington.
50 Malignancy in Uterine Myomata. H. F. Lewis, Chicago.
51 Course and So-called Complications of Cholecystitis. R. Holmes, Chicago.

45. See abstract in THE JOURNAL, June 3, 1905, page 1801.

46. **Surgical Treatment of Bleeding Gastric Ulcer.**—Beck formulates the indications for a surgical procedure in hemorrhage as follows: A first hemorrhage in a previously healthy individual, while in most cases healing by medical treatment, requires careful watching; if prolonged and if the pulse indicates an arterial hemorrhage, it must be treated surgically. A first hemorrhage in a previously suffering patient, if profuse or prolonged, ought to be treated surgically at once or shortly after the patient recuperates, as the ulcer will keep on bleeding and certainly will invite complications. A continuous slight bleeding with marked influence on the patient, such as anemia, weakness etc., is a clear indication for surgical interference. The operation of choice ought to be excision with or without gastroplasty.

48. Id. May 27, 1905, page 1704.

49. Id. June 3, 1905, page 1801.

Therapeutic Gazette, Detroit, Mich.

October.

52 Treatment of Acute Urethritis of Gonorrheal Origin. H. M. Christian, Philadelphia.

53 *Permanency of Results in Pulmonary Tuberculosis—The After-history of 27 Cases Treated by the Combined Hygienic, Dietetic, Open-Air and Tuberculin Treatment. F. M. Pottenger.
54 Artificial Leucocytosis as a Therapeutic Measure. H. A. Becker, St. Charles, Idaho.
55 After-Treatment of Operative Cases. E. Martin, Philadelphia.

53. Permanency of Results in Tuberculosis.—Pottenger reports the after history of 27 patients with pulmonary tuberculosis, treated in office practice. No single remedy or measure was relied on, but everything was used that could be of any benefit to the patient. Twenty-five patients improved. Twenty patients are apparently cured and are now enjoying good health. In not one instance has there been a relapse although six years have elapsed since the first patient was discharged, and 26 months since the last patient was discharged. Seven patients are classed as improved. Of these, all are dead but one. Two of these cases were hopeless from the start, as the patients were suffering from acute tuberculosis, and in another case, which was never hopeful, the patient developed acute tuberculosis within six months after stopping treatment. The other three cases followed the natural course of chronic tuberculosis. Pottenger believes that it is just as possible to obtain a permanent cure in tuberculosis as in any other disease.

Journal Missouri State Medical Association, St. Louis.
October.

56 Clinical Study of Diagnosis of Urinary Calculus. B. Lewis, St. Louis.
57 Hypertrophy of the Heart Without Disease of the Valves. J. R. Lemen, St. Louis.
58 Specimens of Pelvic Surgery, with Critical Remarks. A. H. Meinecke, St. Louis.
59 Practical, Novel and Rational Treatment of Gaping Wounds, Following Extensive Septic Infection. J. F. Menestrina, St. Louis.

Louisville Monthly Journal.
October.

60 Yellow Fever Facts. H. M. Folkes, Biloxi, Miss.
61 Moral Medical Triumvirate. W. F. Sterman, Winterset, Iowa.

Oklahoma Medical News-Journal.
October.

62 Cyst of the Body of the Uterus. F. H. Clark, El Reno, Okla.
63 Treatment of Burns. F. L. Watson, Alderson, I. T.
64 Simple Method of Making Microscopic Examinations of the Blood. W. G. Ramsay, South McAlester, I. T.

Vermont Medical Monthly, Burlington.
September 25.

66 Deforming Chronic Rheumatic Arthritis. C. W. Strobell, Rutland.
67 Diagnosis of Pneumonia. G. Rustedt, Rutland.
68 Loose Bodies in the Knee-Joint. J. B. Wheeler, Burlington.
69 Study of Enzyme Action in Its Relation to Human Metabolism and the Development of Tuberculosis. H. E. Lewis, Burlington.

Columbus Medical Journal.
October.

70 Hints for the Early Management of Mental Troubles. H. C. Rutter, Columbus.
71 Compound Fractures. M. F. Hussey, Sidney.
72 The Trunk of the Sympathetic Nerve. B. Robinson, Chicago.
73 Inflammation. J. U. Barnhill, Columbus.

Journal New Mexico Medical Association, Albuquerque.
September 15.

74 Hemorrhagic Typhoid—Typhoid Parotitis—Recovery. B. R. Black, Las Vegas.
75 Gastroenteric Intoxication in the New-born. J. R. Gilbert.
76 Treatment of Peritonitis. G. C. Bryan, Alamogordo, N. M.

Chicago Medical Recorder.
October.

77 *Actinomycosis. A. D. Bevan, Chicago.
78 Internal Hemorrhoids. C. J. Druseck, Chicago.
79 Two Cases of Suprapubic Prostatectomy. F. A. Lenssman, Chicago.
80 Puerperal Fever as Seen by the General Practitioner. F. L. Gleun, Chicago.
81 The Prescription. W. F. Waugh, Chicago.

77. See abstract in THE JOURNAL, Jan. 28, 1905, page 317.

Journal Kansas Medical Society, Lawrence.
October.

82 Medical Ethics from One View Point. M. H. Hart, Macksville.
83 Notes on General Anesthesia. F. L. Abbey, Newton.
84 Therapeutic Action of Chemic Salts. (Continued). B. D. Eastman, Topeka.
85 Case of Gonorrhea with Complications. G. R. White, Milan.

Southern Medicine and Surgery, Chattanooga, Tenn.
October.

86 Medicolegal Aspects of Insanity. J. T. Searcy, Tuscaloosa, Ala.
87 Appendectomy in Pus Cases. J. A. Gaines, Nashville.
88 Diagnosis of Pregnancy at Term. G. Baughman, Richmond, Va.
89 Stricture Following Gonorrhea. R. C. Bryan, Richmond.

Kentucky Medical Journal, Louisville.
October.

90 Our Prostatics—What Advice and Treatment Shall We Give Them. H. H. Kocher, Louisville.
91 Strangulated Hernia. D. C. Dugan, Three Springs, Ky.
92 Summer Diarrhea in Infants—Prophylaxis and Treatment. L. R. Wilkerson, Russellville.
93 Cholera Morbus. R. F. Duncan, Tompkinsville.
94 Ectopic Gestation. C. G. Daugherty, Paris.

Brooklyn Medical Journal.
October.

95 Pharmacopœia of the United States of America—Eighth Decennial Revision. E. H. Bartley.
96 Cholelithiasis. J. M. Van Cott.
97 Uncertain Course of Bullets in Gunshot Wounds. C. S. Barber.
98 Relief of Hay Fever by Radical Intranasal Operation. A. C. Howe.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.
October 28.

1 Lecture on Graves's Disease. H. Mackenzie.
2 *Case of Addison's Disease. B. Bramwell.
3 *Tumor of the Spinal Cord Removed by Operation. B. J. Ward.
4 *Relationship of Heredity to Disease. F. W. Mott.
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6 Correlation of Sex and Disease. C. J. Bond.
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9 *Certain Features Exhibited by Cells in Their Relation to Cancer. F. W. F. Ross.
10 *Observations on the Feces in Biliary Obstruction and Pancreatic Disease. P. J. Cammidge.
11 *Rapid and Simple Process for the Estimation of Uric Acid. A. F. Dimmock and F. W. Branson.
12 Diphtheroid Organisms in the Throats of the Insane. J. W. B. Eyre and J. F. Plaskman.
13 *Caffein Enrichment Method. C. Hirst.
14 Mitoses in the Cells of the Graafian Follicle. R. Cattley and A. S. Grünbaum.
15 *Influence of Certain Micro-organisms on the Cellular Constituents of the Red Bone Marrow. C. P. Jones.
16 Method of Demonstrating Individual Metabolism in the Investigation of Pulmonary Expiration. A. W. Gilchrist.
17 Aspects of Carcinoma Ventriculi: Its Variations in Malignancy. F. G. Bushnell and F. Hinds.
18 Red Degeneration of a Fibromyoma of Uterus. F. G. Bushnell.

2. Addison's Disease.—Bramwell reports a case of Addison's disease which improved remarkably under the open-air treatment and the simultaneous administration of suprarenal extract. The patient, a man, aged 36, had been ill for eighteen months. He applied for treatment early in November, the weather at the time being cold, wet and stormy. The man was placed on the balcony outside the hospital ward and stood the exposure well. The suprarenal extract was administered in 5-grain doses three times daily. All the symptoms disappeared rapidly and the patient was discharged as cured five and one-half months after the beginning of the treatment. Death occurred suddenly two years afterward, due to asthenia and failure of the heart action, probably from autointoxication. A postmortem examination was not held.

3. Tumor of the Spinal Cord.—Following a fall, Ward's patient developed a marked spastic paraplegia, with no voluntary control of any muscle in either lower limb. A diagnosis was made of the tumor and an operation was advised. The spines and laminæ of the ninth and tenth dorsal vertebræ were separated with saw and bone forceps, and as soon as they were removed the dura mater bulged through the opening. It looked like a cyst filled with transparent fluid, through which the posterior surface of the cord could be dimly seen. On palpating the cord a tumor could be felt almost entirely filling the canal. The dura mater was incised, and immediately fluid under great pressure bulged out, and the posterior roots protruded through the opening thus made; when the first gush of fluid had lessened fluid was also seen to be spurting out in a tiny stream from between the strands of the posterior roots: no tumor was to be seen, but it could be felt as a distinctly localized growth about the size of a walnut, quite hard, covered in by the posterior roots which were stretched over it, and

situated somewhat more on the right side than the left, the cord itself was not to be seen, being completely covered in by the roots. The strands of these roots were carefully separated with a director and the tumor exposed; it was then shelled out quite easily by curving the director and passing it round the tumor in all directions, care being taken to keep it pressed against the tumor so that no damage should be done to the cord. Free oozing followed and immediately filled the cavity from which the growth had been removed, so that the cord itself could not be seen, and as the patient was rather collapsed, no time was wasted in examining the cavity, but owing to the size of the tumor the cord could not have been much thicker than a piece of ribbon. The dura mater was closed by a continuous fine catgut suture, and the wound closed except for a drainage tube. The wound healed by first intention, but there was a discharge of cerebrospinal fluid from the drainage tube hole for three weeks afterward. At first this was very profuse, soaking the dressings through in a few hours, but gradually lessened. Except for the relief of distressing pain in the back, the patient's condition remained practically the same until his death, twenty months later, from extensive bedsores. The tumor was a fibrosarcoma weighing 75 gr. and it had evidently grown from the posterior root sheaths.

4. **Heredity and Disease.**—Mott discusses at length the relationship of heredity to disease, and cites a number of well-known instances, such as Sanger Brown's family of hereditary ataxia, hereditary hemophilia and hereditary Daltonism. A study of statistics relating to the birth and death rate of tabetic and "tabo-paralytic" patients showed the following: Twenty-two married women suffering with tabes or tabo-paralysis had 38 children. Ten are still alive; 10 died in infancy or later; 18 were born dead. These women had 31 miscarriages. Of 54 married men, 151 children are living; 75 died in infancy or later, and 52 were born dead or were miscarriages. Mott says that there is no lack of fertility or fecundity on the part of the male parasyphilitics, but the death rate of offspring is higher than the normal average. The female parasyphilitics, however, show a very high death rate, lack of fertility and sterility. Over 30 per cent. are absolutely sterile and never conceive. In 32 pregnancies in which the father suffered from lead poisoning, the mother being free from that condition, 12 resulted in the death of the infants before term. Twenty children were born alive, but all except 2 died before the fourth year of life. This study shows that not only can lead produce abortions and miscarriages in females, but that male workers in lead, suffering with lead poisoning, have devitalized offspring which either die *in utero* or survive only a short time after birth. As to alcohol, Mott says that it is assumed that alcoholism is a potent factor in the production of mental and physical degeneracy of the offspring, but there are no certain data to show whether the transmission to the offspring is the inherent defect of control, vicious temperament, or the unbalanced mind which led to the drunkenness of the parent or parents, or a defect induced by the poison. Probably there is a transmitted mental defect increased by the poison, fixed and made permanent by the force of imitation. Drunkenness in several generations of the same family may be the result of several factors, and it goes on until regression to the normal by conjugation with a healthy stock occurs, or terminates by degeneration and elimination of the stock. Mott is strongly of the opinion that alcohol is a poison to all neuropathic stocks. Tuberculosis and degeneracy, nervous and mental diseases, and hereditary tendency to suicide are also discussed.

9. **Relation of Cells to Cancer.**—Ross believes that the genesis of cancer and of all malignant growths appears to be a question of alteration of cell polarity, and, therefore, work on cancer research should consider cell polarity in all its bearings.

10. **Feces in Diagnosis.**—Cammidge suggests that a chemical examination of the feces may often be of assistance in arriving at a correct diagnosis in cases of jaundice or suspected pancreatic disease. When the analysis is carefully performed by a competent and experienced observer, the results, considered in conjunction with the clinical symptoms, are of inestimable value.

11. **Rapid Estimation of Uric Acid.**—The method devised by Dimmock and Branson consists in taking 100 c.c. of urine and adding to it 1 gram of lithium carbonate (Li_2CO_3) after boiling in a conical flask (Erlenmeyer) of about 100 c.c. capacity for three minutes, the liquid is filtered while hot to remove the precipitated earthy phosphate, etc., which are washed with a little distilled water until the filtrate measures exactly 100 c.c. To 50 c.c. of the filtrate, which contains uric acid as lithium urate, 5 grams of ammonium chlorid are added, shaking the liquid until dissolved. After three minutes the contents of the flask are warmed to 120 F., so as to secure a uniform aggregation of the precipitated ammonium urate. The whole is now poured into a tube graduated in parts per thousand of uric acid, and deposition allowed to take place, the reading being taken after four hours have elapsed.

13. **Caffein Enrichment Method.**—Birt found that 0.5 per cent. caffein in 1 per cent. peptone water does not always restrain the development of the *Bacillus coli communis;* that 0.5 per cent. caffein in 1 per cent. peptone water inhibited the growth of 26 out of 31 races of *Bacillus typhi abdominalis* examined; that 0.5 per cent. caffein in 1 per cent. peptone water completely arrested the development of 18 varieties of dysentery bacillus; that caffeinated media are of service in isolating streptococci and staphylococci; that negative results with caffeinated media can not be relied on to exclude the presence of *Bacillus typhi abdominalis* in water or dejecta.

15. **Influence of Bacteria on Bone Marrow.**—In the course of observations made by Jones with a view to determining the influence of micro-organisms on the cellular constituents of bone marrow, he found: (a) That different micro-organisms bring about different types of bone marrow; (b) that this depends not only on the virulence, but on the specificity of the organism; (c) that apparently a lymphoblastic marrow is usually associated with an increased production of erythroblasts; (d) that a leucoblastic marrow, on the contrary, is not connected with an increased erythroblast production.

The Lancet, London.

October 28.

19 *Study of Sixty Cases of Membranous Colitis. W. H. White.
20 New Lines of Work in Electrotherapeutics. H. L. Jones.
21 Problem of How Best to Utilize Hospitals and Sanatoriums in the Treatment and Prevention of Consumption. J. E. Squire.
22 Light Treatment of Lupus Vulgaris. M. A. Morris.
23 Multiple Abscesses of the Kidney Due to Acute Ascending Infection of the Normal Urinary Tract by Bacillus Coli Communis. H. L. Barnard.
24 Intravitreous Hemorrhages. L. Paton and W. E. Paramore.
25 *Use of Plaster-of-Paris Splints in the Treatment of Fractures of the Leg. G. Wilkinson.
26 Dementia Due to Huntington's Chorea. G. E. Peachell.

19. **Membranous Colitis.**—White reports the history of 60 cases observed by him. Fifty-one patients were women and 9 were men. Forty-nine of these cases occurred between the ages of 20 and 50, the fourth decade claiming the largest number, 22. The youngest patient was under 10 years and the oldest over 70. Eight of these cases were fatal. In 16 cases complete recovery did not take place, although they were not fatal; 6 patients were much improved, and 21 made complete recovery. White lays great stress on the association of membranous colitis with disorders of the female generative organs. In about 41 per cent. of his female patients such an association existed. White says that by far the most important part of the treatment is to keep the large bowel empty. The simplest way to do this is by aperients and in many cases castor oil by the mouth will cure the patient. The best time to give this is the early morning as soon as the patient wakes; then the bowels are usually comfortably opened after breakfast. Many people wake an hour or two before they get up, so the oil should be taken then. Between half an ounce and an ounce is usually required. If the disease has lasted some time many weeks, even up to twelve or sixteen, may be needed before improvement is observed; the treatmnt should never be given up until a long trial has been allowed to it, and in all cases it should be continued for some months after apparent recovery. A minority are so nauseated by castor oil, however given, that they can not take it; in such cases sulphate of magnesium should be tried instead, or if this be found unsuit-

able calomel should be given over night. Should these methods fail the large intestine should be kept empty by washing out with plain water at a temperature of 100 F., a pint or more being used at a time. Operation should not be resorted to except in desperate cases.

25. **Plaster-of-Paris Splints.**—In order to overcome the objections made to plaster casts applied in the treatment of fractures, Wilkinson uses a form of plaster splint which he believes fulfills every requirement. Gauze such as is used for making gauze bandages is employed. The splints consist of from eight to twelve folds of this gauze, between the layers of which dry plaster is well rubbed in. Before applying they are immersed in warm water, squeezed out, and then more dry plaster is rubbed into their inner surfaces. No plaster cream should be employed. If the plaster is well baked, splints made in this way set very quickly and firmly and are very durable. The method of applying the plaster splints is as follows: Supposing the case to be one of fracture of one or both bones of the leg in the lower third, the plaster splints need only be carried as high as the knee. A pattern of the posterior splint is obtained by laying the sound limb on a sheet of paper and cutting round it with scissors. The splint extends from the root of the toes, under the heel, and up the back of the leg to just below the knee. It should be wide enough to embrace about two-thirds of the circumference of the limb. A good width should be allowed at the ankle to accommodate the projection of the heel. The pattern must be turned over so as to reverse the sides in cutting out the splint for the fractured limb. From ten to twelve folds of ordinary gauze bandage material should be laid out in a length equal to, and rather wider than, the pattern and cut out to form the posterior splint. This should be laid on a considerably wider piece of gauze and the whole thickness stitched together down the middle line. Dry plaster should be rubbed in plentifully between the layers of the gauze. The extra width of the outside layer of gauze should be split into tails on either side of the splint and the tails rolled up so that they may not become "taffied." The posterior splint should then be rolled up from either end on rollers. Two pieces of broomstick answer the purpose. The anterior splint is simply a strip, three to four inches wide, long enough to reach from the root of the toes to the knee. From eight to ten folds of gauze suffice and the ends should be secured by stitching them together. Plaster is rubbed in as in the case of the posterior splint, and the splint is rolled up on a piece of broomstick. The leg should then be bandaged evenly with a single thickness of flannel, a pad of wool being placed on either side above the heel, this being a point on which the splint is likely to cause pressure. The knee should be bent to a right angle and the leg laid on a support. Both anterior and posterior splints on their rollers are then placed in warm water for a few minutes to moisten the plaster. The surgeon then makes traction from the heel and foot. Counter traction is obtained by passing a clove hitch round the upper part of the thigh and tying to the head of the bed. Flexing the knee to a right angle eliminates one of the chief obstacles to reduction of the fragments by relaxing the gastrocnemius muscle. If the foot is kept at right angles to the leg and the inner side of the great toe in a line with the internal malleolus and the inner side of the patella the fragments will come into correct position on making traction. The anterior splint is now unrolled and laid along the front of the leg and foot. The posterior splint is removed from the water and well squeezed out. It is then unrolled and laid under the limb. Some additional plaster may be rubbed into its upper surface. While the surgeon keeps up traction and maintains the foot in the correct position an assistant brings the posterior splint round the under surface of the leg and foot and fixes it in position by tying the tails over the anterior splint. It is better to avoid tying the knots directly over the sharp anterior margin of the shin, where they may cause undue pressure. Traction with the foot in the correct position must be kept up until the plaster is set sufficiently hard to prevent displacement of the fragments; three minutes generally suffice. The leg is left for about half an hour lying flexed on the box with a support, such as a thin book, under the heel and hot-water bottles or bricks on either side to hasten the drying of the plaster. After about twelve hours the plaster will be perfectly hard and the patient may then be allowed up on crutches. Unless there is any special reason for cutting up the case it is usually left untouched for about three weeks, when a fair amount of union may be expected to have taken place. It is then cut up with a pair of scissors along the interval between the two splints and subsequently the limb should be removed from the case about twice a week for passive movements of the ankle. After replacing it the splints should be bandaged firmly with a calico roller. If the fracture is above the lower third of the leg it will be necessary to fix the knee joint. The splints may be put on in the same way, except that the knee will have to be in the extended position and the splints carried as high as the middle of the thigh. The advantages claimed for this form of plaster cast are the following: 1. It is applicable to all cases of fracture of the leg, with the exception of certain cases of compound fracture. 2. Its method of application is simple. 3. It is rigid and durable. 4. It can readily be cut up without disturbing the limb, and can be reapplied without loss of rigidity. 5. It is put on with the limb in the most favorable position for reduction of the displacement—i. e., with the knee flexed and the gastrocnemius relaxed. 6. The position of the leg is not shifted and traction on the axis of the limb is kept up during the whole time of application of the splints. Consequently there is a fair certainty of the fragments being fixed in good position.

Semaine Médicale, Paris.

27 (XXV, No. 42, October 18.) *The Struggle Against Tuberculosis, According to the Labors of the Paris Congress.—La lutte contre la tuberculose. L. Cheinisse.
28 (No. 43.) Œsophagoscopie et trachéobronchoscopie. J. Garel.

27. **Present Status of Campaign Against Tuberculosis.**—Cheinisse remarks that the first enthusiasm for the sanatorium as the sole means of salvation from tuberculosis has subsided. The recent international congress showed this declining tendency in a marked degree. The sanatorium for the well-to-do person, who can modify his mode of life afterward so as to maintain the benefit derived, is still the great benefit claimed at first. Members of the working classes, however, return from the public sanatorium to their old poverty-stricken environment. Their zeal and conviction will gradually be modified, and they will refrain from using their pocket cuspidore for fear of the prejudices of proprietors and fellow-workmen, as it stamps them as dangerous. The rôle of the sanatorium in prophylaxis is thus illusory; its therapeutic rôle, evidenced by the restoration of the working capacity, is more than dubious, as it is subordinate to the natural progress of the disease and to the occupation of the individual. On the other hand, the expense of the public sanatorium as conducted in Europe is out of all proportion to its purely palliative effect among the laboring classes. It should be reserved for the incipient cases, and should be regarded merely as the auxiliary to certain more general hygienic measures. Cheinisse cites Beco to the effect that the sanatorium has been too long regarded as the pivot of the antituberculosis campaign, when in reality it is only a secondary element. The German advocates of the sanatorium confessed that about 7 out of every 10 applicants have to be rejected. The tuberculosis dispensaries are more humanitarian than sociologic in their aims, and Calmette calculates that in the one at Lille it costs about $14,500 dollars a year to care for 100 families, exclusive of expenses of installation. Experience has also shown that, besides the true scientific and useful dispensaries, pseudo-dispensaries spring up for advertising purposes, which, under the guise of benevolence, are in reality but centers of competing interests to advertise the physician in charge and his assistants as specialists, and to advertise politicians connected with the inception and promotion of the dispensary. These various interests obscure the real work of the dispensary, and absorb the attention which should be devoted to the patients, so that the latter find themselves at the mercy of regrettable practices where seances of electrization or ozonation or exploitation of pharmaceutic specialties substitute hygienic regulations. The congress adopted a resolution to the effect that the sanatorium and the dispensary are neither exclusive nor predominant in the campaign against tuberculosis, but that the prob-

lem of healthy homes will always dominate its prophylaxis. Courtois-Suffit preached that the economic factor is the main one in the campaign against tuberculosis. "The conditions of life of the working classes must be changed. Their starvation wages must be raised by modifying the conditions actually existing between capital and labor." Cheinisse concludes with the remark that until this has been realized the economic conditions of the working classes will oppose an inflexible veto to the extermination of tuberculosis. "However," he adds, "the interests of the mutual benefit societies, the sickness insurance societies on the mutual plan and of similar organizations would be promoted by reducing the morbidity from tuberculosis, and they may prove a powerful aid in the campaign when they once awake to this fact." Another innovation which promises much is the organization of charitable societies whose aim is to remove healthy children from tuberculous environments and place them in healthy homes in the country or elsewhere. France takes the lead of all countries in its care of weakly children, sending those affected with tuberculosis to seaside health resorts and sanatoriums. It again leads the way in the recent organization of the Society for the Preservation of Children against Tuberculosis, which does not wait for the children to become tuberculous, but removes them from the infectious surroundings at once if it proves impossible to improve the home environment.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

29 (XXXI, No. 39, Sept. 28.) Retrogression of Hemianopsia After Paralytic Attacks.—Ueber den Gang der Rückbildung hemianopischer Störungen nach paralytischen Anfällen. A. Pick.

30 Zur Kenntnis Pneumococcensepsis als Sekundärinfektion. A. Vlach.

31 *Weitere Beiträge zur Fremdkörperentfernung mittels der Oesophagoskopie (removal of foreign bodies). v. Hacker.

32 *Ueber ischiadische Skoliose in Theorie und Praxis. A. Lorenz.

33 *Ueber operative und nicht operative Behandlung entzündlicher insbesondere eitriger Adnexerkrankungen (suppurative affections of adnexa). O. von Franqué.

34 Zur osteoplastischen Resektion der äusseren Augenhohlenwand (of external wall of orbit). W. Czermak.

35 Zur Diagnose der Neubildung der Kieferhöhle (neoplasms of maxillary sinus). O. Chiari.

36 *Ueber die chirurgische Behandlung der otogenen Meningitis. G. Alexander.

37 *Zum Problem der Angioneurosen-Behandlung. K. Kreibich.

38 Diätetik des vorgeschrittenen Kindesalters (for older infants). Monti.

39 Nothnagel's last Bemerkungen ueber seine stenokardischen Anfälle (Nothnagel's last notes. See news columns, page 1179).

31. Removal of Foreign Bodies by Aid of Esophagoscopy.—Since 1887 von Hacker has been urging the necessity for direct inspection, preliminary to extraction, of a foreign body in the esophagus. He reported 27 cases in 1901 and now reports 12 more, in all of which extraction of the foreign body proceeded smoothly after its shape and location had been determined with the esophagoscope. He thinks that the surgeon should practice esophagoscopy as a routine procedure, just as cystoscopy has been adopted. In his experience, pieces of bones were found in 8 cases, false teeth in 4, and fruit stones in 2. In 17 cases in which there was a cancer or stricture, the foreign body proved to be a chunk of meat in 8, and a plum stone in 6, a cherry stone in 2 and a marble in 1. In 3 cases he was able to remove a plum stone with forceps from above, controlled by esophagoscopy. Local anesthesia with 20 per cent. cocain has always proved sufficient for adults, but for children he generally prefers chloroform anesthesia.

32. Sciatic Scoliosis.—Lorenz shows by several diagrams that sciatic scoliosis is the result of instinctive reflex contraction of the muscles. It protects the lumbo-sacral nerves against mechanical, painful traction, and no attempt should be made to correct this scoliosis while the affection is in its painful stage. On the contrary, the trunk should be immobilized in the position which the patient finds is least painful. Any other mode of fixation increases the painfulness and the cast has to be taken off.

33. Indications for Operative or Non-operative Treatment of Affections of Adnexa.—The statistics of Keitler and Peham show that in one-sixth of their cases of suppurative affections of the adnexa treated by conservative measures the patients regained complete functional capacity, as evidenced by pregnancy later. This surpasses the results attained by operative measures. When operating in cases of pyosalpinx, von Franqué now makes a practice of suturing the wall of the abscess to the wall of the vagina, as also in cases of suppurating hematocele. This insures constant drainage; an ordinary drain is liable to become displaced or to be removed by the patient, as occurred in some instances which he cites. As a rule, in gonorrheal or puerperal pyosalpinx the patients have more or less temperature, but it is reduced to normal in one or more weeks by mere rest in bed and application of the ice bag. The spontaneous and induced painfulness of the tumor in the adnexa subsides more slowly, while the tumor gradually shrinks in size. Several days to a week after the temperature has been reduced to normal, he commences hot irrigations of the vagina, followed by ichthyol-glycerin tamponing. This is supplemented by alcohol compresses or Priessnitz packs to the abdomen. Superheated air can also be applied locally to good effect in so far as the pains are concerned, although his experience has not shown any decided superiority of the superheated air in gynecology over other methods of treatment. His patients were kept reclining until the tumors had grown smaller and were no longer painful, which occurred on an average in from four to six weeks. Then baths were given, especially Franzensbad brine baths, and this course of brine baths was repeated a year afterward. Patients able to be treated according to this plan seldom require operative measures for a gonorrheal or puerperal pyosalpinx. The brine baths must not be commenced until after the temperature has been normal for from six to eight weeks, and they should be suspended at the least rise. He warns, further, against massage. It can not do much good, he says, and is liable to do great harm, mobilizing the germs and spreading them into hitherto sound regions, while cautious tamponing, rinsing and baths leave them undisturbed and enclosed in the more or less quiescent focus. Operative intervention is indicated on suspicion of cancer and when symptoms indicate torsion; also when the symptoms suggest that a tuberculous process in the adnexa is the primary or principal localization of the affection. Von Franqué has had 11 out of 13 patients who have been in good health for from eleven months to ten years after a radical operation for tuberculosis of the adnexa. In other patients, he was able artificially to wall off the focus from the abdominal cavity, even when there was already a communication into the rectum. Infection from the field of operation occurred in only 1 out of the 20 tuberculous patients on whom he has operated, and possibly it might have been prevented by more ample drainage in this instance. A simple hydrosalpinx can be evacuated if it causes trouble.

36. Surgical Treatment of Otogenic Meningitis.—Alexander describes the technic at Politzer's clinic. It consists in immediate operation on the ear and removal of the entire disease focus, then exposure of the dura, incision and drainage of the intradural space, suction and aspiration of the fluid through the opening thus made, and lumbar puncture. The virulence of the micro-organisms is an important factor in the results of treatment, and this should be determined at once, preferably by inoculation of animals. This was scarcely attempted in the 10 cases treated by operative intervention on record. Five were essentially improved. The indications for operation require the differentiation of suppurative from serous meningitis, and for this reason lumbar puncture is imperative. Repeated lumbar puncture for therapeutic purposes may be advisable in meningitic affections not originating in the ear, or when the focus is not accessible, but in otogenic meningitis local surgical intervention and local aspiration of fluid from the intracranial regions lying near the ear are preferable. In case of suppurative meningitis, the dura should be opened wider, with an incision from 1.5 to 5 cm. long. Counteropenings may be useful to promote ample drainage. Politzer made a counteropening in the posterior cranial fossa, behind the sinus, in 2 cases with good results. In cases of far advanced otogenic suppurative meningitis, it might be advisable to expose the brain and to remove the outer diseased layer in case of existing encephalitis. Manasse has recently recorded a case of serous meningitis with superficial encephalitis, which suggests the possibility of removing the softened diseased membranes and the adjacent layers of the cortex in such cases, as also in the early stage of the suppurative form. Experi-

ence has fully demonstrated that exploratory opening of the cranial fossa in connection with the operation on the ear is a less dangerous procedure than temporization.

37. **Causal Treatment of Cutaneous Affections.**—Kreibich believes that a certain number of cutaneous affections are sympathetic reflex phenomena. The stimulus is not exerted on the vasomotors directly, but indirectly, by sensory stimuli, centrally transmitted. The pathologic intensity of the effect is due either to the intensive sensory irritation, as, for instance, in the affection of the ganglion in herpes zoster, or else to the abnormally increased excitability of the vasomotors. This pathologic excitability which causes the vasomotors to react to sensory stimuli with a pathologic response can best be explained by assuming a lack of stability on the part of the dominating vasomotor center. He is convinced that this is the cause of gangrene of the skin, of urticaria, prurigo, glossy skin, decubitus, etc., while Raynaud's disease is due to abnormal excitability of the vasoconstricting instead of the vasodilating center. Local measures are unable to influence such a vasomotor phenomenon. It must be attacked at the source, by preventing the afferent sensory irritation and by reducing the central reflex excitability. For the latter, the most effectual weapon at our command is arsenic. It acts on the central nervous system, as is shown by its efficacy in chorea, and by the fact that too large doses induce typical reflex phenomena, such as arsenic zoster and urticarial, painful erythema. When an affection with itching follows certain lines or appears in symmetrical regions, its origin in the central, sensory tracts becomes apparent, and arsenic is the remedy *par excellence* for the condition. He relates experiences which demonstrate beyond question that this drug is superior to other remedies in reducing morbidly exaggerated reflex excitability. It has proved exceptionally successful in all long-persisting, urticarial, urticaria-erythematous or purely pruriginous conditions. Inadequate or unsystematic dosage is generally responsible for the failures. He gives it in the form of Fowler's solution and aqua menthæ, equal parts of each. Five drops are taken morning and evening, then ten drops morning and evening. He keeps the patient on this dose until its effect is apparent. If stomach symptoms develop, he continues the arsenic in the form of subcutaneous injections of sodium arsenate. When convenient, he combines the subcutaneous injections of .02 gm. of the sodium arsenate every second day with five drops of the above mixture morning and evening.

Münchener med. Wochenschrift, Munich.

40 (LII, No. 39, September 26.) *Ueber Spirochæte pallida. G. Sobernheim and E. Tomaszewski. Id. K. Herxheimer.
41 Die Wanderungsfähigkeit der Lymphocyten (migrating faculty). H. Schridde.
42 *Veränderungen im Granulationsgewebe flutzlöser fungöser Herde durch Hyperämisierung mittelst Saugapparate (action of congestive hyperemia). A. Hofmann.
43 Ueber menschen-pathogene Streptokokken. E. Fraenkel.
44 *Der Wert der einzelnen klinischen Symptome des Typhus abdominalis für die Diagnose. G. Treupel.
45 *Serum-Behandlung der fibrinösen Pneumonie. Lindenstein.
46 Ueber Frakturen-Behandlung. Gebele.
47 *Bier'sche Stauungs-Hyperämie bei Sehnenscheidenphlegmonen (congestive hyperemia for phlegmons in tendon sheaths). W. Lossen.
48 *Eine seltene Komplikation der diagnostischen Probe Excision. v. R. Steinbuchel.
49 *Augenerkrankungen und gastro intestinale Auto-Intoxikation (eye affections). F. Groyer.
50 Behandlung der Syphilis. M. v. Zeissl.
51 Grundsätze und Erfahrungen auf dem Gebiete der Kindermilchbereitung (preparation of milk for infants). Backhaus.
52 Eine einfache Methode der Hauttemperaturmessung (temperature of skin). G. Gaertner.
53 Der Arzt als Begutachter Unfallverletzter (medical certificates after accidents). Vulpius.

40. **Spirochetes in Syphilis.**—Sobernheim remarks that the findings of spirochetes coincide with the clinical experience in regard to the transmission of syphilis. He found them in 50 out of 58 cases of certain syphilis, all the positive cases being those with primary or secondary lesions, while the 8 negative cases were those with tertiary lesions. In 34 control cases of various affections, the findings were invariably negative. Herxheimer states that perfected staining technic has resulted in the discovery of certain bodies in or near the spirochetes which he regards as confirming their protozoan nature.

42. **Changes in Granulation Tissue After Treatment by Suction Congestive Hyperemia.**—Hofmann gives illustrations of the microscopic changes in the tissue after it had been treated with Bier's suction apparatus to induce congestive hyperemia. He was surprised to find that the leucocytes had nearly vanished from the region, actually washed away by the congestion and hyperemia induced. The benefit of the procedure must lie in the fact that the bacteria and their poisons are washed away also, while the influx of fresh blood to the parts brings renewed life and vigor. The histologic picture shows that the vessels become much enlarged under the suction, while the composition of the blood is comparatively normal, showing no preponderance of leucocytes. The parts have merely been thoroughly rinsed and drained.

44. **Signs of Typhoid Fever.**—Treupel has been diligently sifting the clinical records of 60 cases of typhoid fever recently observed. The anamnesis suggested the possibility of typhoid in only 75 per cent.; a typical temperature curve was noted in only 46 per cent.; bronchitis at the commencement of the disease in 48 per cent.; pulse slow in proportion to the temperature in 86 per cent.; tendency to euphoria or remarkably good general condition in 56 per cent.; typhoid tongue in only 16 per cent.; catarrhal sore throat in 33 out of the 60, and follicular sore throat in 1; abdominal symptoms, meteorism, tenderness, etc., in 61 per cent.; enlarged spleen in 86 per cent.; roseola in 71 per cent.; diazo reaction in 73 per cent., and the agglutination test positive in 90.6 per cent. of 53 patients, and typhoid bacilli found in the blood by the second or third day in 92.8 per cent. of 14 cases. In 3 cases, the clinical picture was at first that of a rhinolaryngeal bronchitis, without roseola, enlarged spleen or diazo reaction, but the positive findings of the agglutination test were confirmed by the course of the disease. In another case, a woman recovering from childbirth had chills. The uterus was normal for her condition and the persisting euphoria suggested the possibility of typhoid, which was sustained by the positive agglutination. In another case, a woman presented considerable cachexia, dullness over the apices, hectic fever and strongly positive diazo reaction. The lung affection seemed to remain stationary and no bacilli could be found in the sputa, while the diazo reaction grew more and more marked, and the fundus of the eye showed no signs indicating miliary tuberculosis. The agglutination test was very strongly positive, and typhoid bacilli were finally cultivated from a furuncle on the leg and from the urine. See editorial page 1575.

45. **Serum Treatment of Fibrinous Pneumonia.**—Lindenstein's experience in 4 cases has been extremely favorable.

47. **Suction Hyperemia in Treatment of Tendon Sheath Phlegmons.**—Lossen gives illustrations of the remarkable functional results attained in 3 cases of tendon-sheath phlegmons in the hand, treated by Bier's method of congestive hyperemia. Healing was prompt and the tendons did not become contracted or necrotic, but resumed normal functioning.

48. **Fatal Complication of Exploratory Excision.**—A woman of 40 presented atypical uterine hemorrhages and, although in apparently the best of health, the suspicion of cancer was excited by the aspect of the portio vaginalis, and an exploratory excision was made. Symptoms of septicemia developed at once and the patient died in less than a month. She had been referred to a careful surgeon for the excision, it had been done in a well-equipped operating room, and the field had not been touched by the hands nor was any other sin against asepsis committed. The exploratory excision had revealed incipient carcinoma and also several mucous follicles which had become closed at the mouth and distended by their secretion. Steinbüchel had seen such little cysts before and had had occasion to open some of them with the thermocautery on several occasions in years past. It was noticed during the exploratory excision that the contents of two of these Nabothian follicles had a somewhat different appearance from the others, as if pus were mixed with the mucus. At the same time, a small vein had been opened by the exploratory excision. The vein was sutured and the lips of the wedge-shaped excision brought together and sutured. Two sutures for a wound only about an inch long did not close it hermetically, but he ascribes to these sutures the evil results. If the wound had been left open and drained, the germs would have been drawn outward.

They must have been exceptionally virulent, and some must have found their way into the opened vein and thus have transformed a clean wound into an infected one. He advises, therefore, in case a retention cyst of this kind is opened in the course of an exploratory excision that it should not be sutured, but should be merely tamponed and drained. In any event, a patient should be carefully supervised after an exploratory excision.

49. Eye Affections and Autointoxication.—Groyer announces that the test for indican resulted strongly positive in a large number of cases of eye affections for which he could not discover any primary cause. They included cases of scleritis, keratitis, iritis, iridocyclitis, retinitis, choroiditis, neuritis, retrobulbar neuritis, cataract, opacity of the vitreous body, hemorrhages in the vitreous body, glaucoma, atrophy of the optic nerve, hemianopsia, scotoma, paralysis of the ocular muscles and functional disturbances for which no cause could be discovered. In all of these cases, he noted evidences of digestive disturbances with tenderness on pressure of the regions of the stomach, liver, gall bladder and spleen, or typical pains in the sacral region and between the shoulder blades, radiating into the shoulders and arms; or else pain on pressure of the emerging points of the lateral branches of the intercostal nerves, the cervical plexus, the supraorbital, infraorbital and mental nerves, or radiating pains in the forehead and temples and occiput, or pronounced palpitations or nervous respiratory disturbances. In all the above ocular disturbances no affection of any other organ could be detected. In all these cases, the tests for sugar and albumin in the urine always resulted negatively, while the tests for indican revealed its presence in very large amounts. As indican is an indication of putrefactive processes going on in the intestines, he assumes that its presence in these cases indicates that poisons from the intestines are circulating in the body of these patients, these intestinal toxins affecting primarily now this, now that organ of the body. Their ravages are most readily perceived in the eye, and hence the ocular disturbances were the first to attract attention.

Wiener klinische Wochenschrift, Vienna.

Last indexed page 748.

54 (XVIII. No. 28.) *Zur abdominellen Operation des Gebärmutterkrebses (uterine cancer). W. Latzko.

55 Zur Pathologie der Zungengrundtumoren (of base of tongue). Two cases. E. Glas.

56 Ueber einen Fund von Spirochaete pallida im kreisenden Blut (circulating blood). F. Raubitschek.

57 (No. 29.) Der gegenwärtige Stand der Zahnheilkunde (present status of dentistry). E. Weiser.

58 *Zur Aetiologie der Pinguecula und des Pterygiums. II. A. Bachmeister (Graz).

59 (No. 30.) Apparat für Inhalationsversuche. J. Bartel.

60 *Zur Inhalation zerstäubter bakterienhaltiger Flüssigkeit. R. Hartl and E. Herrmann.

61 *Zur Kasuistik und Therapie der Pankreas Cysten. A. Exner.

62 *Ein leicht transportabler Blutdruckmesser (blood pressure measure). S. Tauber (Vienna).

63 Die Lehre von den normalen Antileibstanzen im Lichte unserer Lipoidtheorie. L. Detre and J. Sellei.

64 Ueber die Antihämolysine des normalen Serums. M. v. Eisler.

54. Abdominal Extirpation of Uterine Cancer.—Latzko makes it his principle in operating on a cancer of the uterus to remove all the glands, lymphatics and vessels, with the connective and fat tissue, *in toto*. He gives an illustration of the piece removed, a long chain of glands hanging from it on each side, and describes his technic in detail. The only possible dubious feature in regard to asepsis is the cutting of the uterus out of the vagina, but this is the last step in the operation. Ten patients operated on by this technic all recovered with remarkably little suppuration. He ascribes this to the ample drainage, the lack of recesses in the connective tissue, and the avoidance of mass ligatures. This technic, he claims, demonstrates the feasibility of removing all the suspicious elements in extirpating a cancer without enhancing the gravity of the operation.

58. Etiology of Pterygium and Pinguecula.—Sachsalber reiterates his previous announcement in regard to pterygium and pinguecula as being the result of irritation from the presence of fine downy hairs on the inner side of the lids. He does not claim that all cases are of this origin, but that a large proportion can be traced to this source and that a cure can be effected by removal of the hairs. The hairs are generally found in the inner angle; in some cases he has found them so long that they projected 2 mm. beyond the limbus of the cornea, but they are so fine that they can seldom be seen without a magnifying glass. He describes a series of 6 cases, and states that in examination of 1,100 inmates of an insane asylum he found the hairs in all but 3 of the individuals affected with pinguecula, and in nearly all the cases of progressive pterygium. The stationary, traumatic cases, of course, do not belong to this category. His first article was summarized on page 1971 of the last volume of THE JOURNAL.

59-60. Experiments with Inhalation of Drugs and Germs.—Bartel describes an apparatus which supplies a very fine spray blended with compressed air for inhalation. Hartl and Herrmann report experiments with the apparatus on animals compelled to inhale a spray containing the *Bacillus prodigiosus*. It was found that the bacilli inhaled were caught on the walls of the nose and throat, while but a very small number of them reached the peripheral portions of the lungs. The experiments proved, however, that the inhaled spray from the apparatus actually found its way to the remoter parts of the air passages. The inhaled bacilli did not proliferate.

61. Seven Cases of Pancreas Cysts.—Exner has been collecting information in regard to the later fate of 7 patients with cysts in the pancreas who were operated on at Hochenegg's clinic. The cases have all been previously published. One of the patients was treated by total extirpation of the cyst and is in perfect health. Of the other 6 patients only 2 are still alive after ten years, and one of them has a recurring fistula. These 6 patients had been treated by suturing in the cyst. Death was due in one instance to ileus from adhesions. In a more recent case a man was kicked in the stomach region by a horse. When seen six weeks later, he had a tumor in the pancreas region, with sugar in the urine, a sign of functional disturbance in the pancreas. The tumor increased in size during the day, but the next morning it suddenly subsided, having perforated into the abdominal cavity. This did not cause any special disturbances. The tumor was probably a hematoma in the pancreas, and its rupture put an end to the functional disturbances in this organ. Four months later the tumor had recurred. This time it proved to be a cyst, and no traces of the preceding hematoma could be discovered at the operation. The cyst was drawn up and sutured to the parietal peritoneum, and not opened until five days later. Its wall was about 3 cm. thick. A small drain was inserted and the secretion gradually subsided from a quart in the first twenty-four hours to 300 c.c. in about five weeks, and then became minimal. The fistula has not healed during the five months since, and it is now proposed to remove the shrunken wall of the cyst to facilitate closure of the fistula.

62. Portable Blood Pressure Measure.—The little instrument consists of a manometer with a tube on each side of its base. One tube connects with a broad ring slipped over the finger, the other with a small syringe which serves to compress the air in the tubes.

Gazzetta degli Ospedali, Milan.

Last indexed page 1188.

65 (XXVI No. 103.) Sleeping Sickness.—La malattia del sonno. C. Tarchetti.

66 *Influence of Cold and Heat on Development of Cerebral Hemorrhage and on Gastrointestinal Affections.—Influenza del freddo e del caldo sullo sviluppo di certe malattie. E. Leonardi.

67 Suture secondaria dei nervi. A. Dal Vesco.

68 (No. 106). *Sulla patogenesi dell' idrocele volgare. R. Cocca.

69 *Nuovo metodo per la stero-diagnosi del tifo. G. Appiani.

70 (No. 112.) *La crioscopia delle orine nelle malattie infettive. E. Mariotti.

71 *Prodigiosi della malaria. G. Casardi.

72 Sui canali anomali del pene. Urethra duplex. Condotti parauretrali (deformities in passages in penis). E. Alevoli.

73 Bullet Wound of Spinal Cord.—Lesione trasversa completa del midollo spinale per ferita d' arma da fuoco. I Bruschi.

74 Legatura del dotto di Wirsung (Wirsung's duct). T. Carpentieri.

75 (No. 114.) Questioni di fisiologia cerebrale. E. Tramonti.

76 (No. 115). *Sui rapporti fra la pericardite e le lesioni valvolari dell' aorta. L. Perrin.

77 *Un nuovo pericolo dell'operazione di Talma (new danger of omentopexy). D. Maragliano.

78 *Remedying Insufficient Mammary Secretion.—Della possibilità di rimediare alla insufficienza della secrezione lattea nella donna. G. B. Borsagli.

79 Diagnosi e cura dello edema maligno e della pustola maligna. V. Torresi..

66. Influence of Cold and Heat on Certain Affections.—Leonardi, in central Italy, has been studying the records of 107 cases of cerebral hemorrhage during the last fourteen years. He found that 71 cases occurred during the three coldest months and 23 during the three hottest months, while only 15 were observed in fall and spring. This fact, in connection with others which he cites, he thinks, demonstrates that the visceral congestion during cold weather is responsible for the hemorrhages. The blood is driven away from the periphery; it accumulates in the right heart, with consequent enlargement of the vessels and tendency to rupture. During the summer the blood is drawn to the periphery, and the heart is overtaxed. The brain is a peripheral organ, and consequently the congestion in its vessels is liable to entail rupture. The extremes of the seasons thus have the same effect, but by a different mechanism. The gastrointestinal tract also suffers in the same way, the visceral congestion in winter and the anemic condition of the viscera during the summer causing disturbances. The result of each is identical, that is, abnormal digestive functioning, and the presence of imperfectly digested food in the alimentary tract, entailing autointoxication and consequent nervous depression.

68. Pathogenesis of Hydrocele.—Cecca has demonstrated that certain portions of the parietal peritoneum are semipermeable, that is, they allow the passage of water alone while holding back its salts. He believes that when the vaginalis has developed from the part of the parietal peritoneum exhibiting this property, a predisposition is afforded for the development of hydrocele. He describes his experiments on animals and on the cadaver and tests of the membrane taken from normal individuals. All concur in demonstrating only semi-permeability on the part of the membrane in the cases of hydrocele.

69. New Method of Serodiagnosis of Typhoid.—Appiani writes from Lucatello's laboratory at Padua to describe a technic for the serodiagnosis of typhoid by means of the precipitating action of the pulp of typhoid bacilli. He thinks that the procedure described is more reliable, more practical and simpler than the ordinary agglutination test. He first made a large amount of bouillon culture of pure and extremely virulent typhoid bacilli. On the eighth day he filtered 2 liters of the culture through a Chamberland filter, rinsing by passing sterilized and distilled water through the filter for twelve hours. The pellicle left on the filter was ground for four hours in a mortar, a few drops of distilled water being added occasionally. The result was about 20 c.c. of a turbid, milky colored fluid. This was filtered again, and the result was a clear fluid, slightly alkaline, not coagulating with heat nor throwing down a precipitate with the ordinary reagents for the albuminoids, and becoming only slightly turbid when treated with acetic acid and potassium ferrocyanate. A few cubic centimeters of serum from a typhoid patient were placed in test tubes arranged in a stand and 5 c.c. of the bacillus pulp, obtained as described above, was allowed to flow down the wall of the tube on top of the serum. No change was observed in the contents of the test tube for nearly two hours. Then the fluid began to grow turbid, until it was entirely turbid after the third hour. A clear zone then developed at the point of contact, becoming most pronounced by the seventh hour, the fluid above and below remaining turbid indefinitely. These results were observed in serum from a patient at the twelfth day of typhoid. In another at the twenty-first day, the process proceeded much more rapidly, the whole being complete in an hour and a half. Appiani is now experimenting with the colon bacillus by the same technic.

70. Freezing Point of Urine in Infectious Diseases.—Mariotti reviews the history and present status of cryoscopy, and adds that most of the communications on the subject have been devoted to the conditions in heart and kidney affections. In this article he gives tables with the details in regard to the urine in 8 cases of typhoid, pneumonia, malaria or tubercular meningitis. These tables demonstrate that the molecular diuresis is low in febrile infections, but it may become abnormally high during convalescence. This is probably due to the elimination of the substances retained during the course of the disease. Cryoscopy of the urine in acute infectious diseases is a better indication of the condition of the organic metabolism than of the functional capacity of the kidneys.

71. Prophylaxis of Malaria.—Casardi mentions that the present season has been an unusually wet one, and yet the prophylactic measures introduced against malaria have succeeded in keeping down the morbidity from this cause. The proportion of persons primarily affected has dropped from 38.71 per cent. to 0.3 per cent. since the houses have been screened, in one of the greatest hotbeds of malaria. In the regions where malaria is not bad, prophylactic doses of quinin are sufficient to ward off infection, but in the worst infected districts mechanical measures are indispensable. He adds that the term malaria means bad air, but that the air has been exonerated of complicity in the development of malaria except as it bears up the wings of the mosquitoes. He concludes by urging legislation to compel the screening of all houses in malarial districts.

76. Relations Between Pericarditis and Valvular Lesions of the Aorta.—Ferrio reports five cases of valvular affections superposed on pericarditis and discusses the connection between them.

77. New Danger of Omentopexy.—A robust man of 32 exhibited symptoms of cirrhosis of the liver and, as the ascites was large and annoying, omentopexy was undertaken to provide collateral circulation for the portal vein. The operation proceeded smoothly and the patient was convalescing satisfactorily when, on the third day, symptoms of collapse became apparent and he died in a few hours. The autopsy revealed laceration of one of the veins in the omentum. This accident was explained by Maragliano as the result of an effort to vomit. The stomach in the retching must have pulled on the omentum and torn one of the vessels, with resulting hemorrhage. The attendant did not realize the seriousness of the symptoms until too late. If the surgeon had been called at the first sign of collapse the laparotomy wound might have been opened and the ruptured vessel sutured. The case is a warning to make the fixation high up and to pull the omentum down as little as possible. Everything should be done to prevent vomiting until solid adhesions have formed; a week is long enough for this, as a rule.

78. Remedy for Defective Secretion of Milk.—Burzagli reviews the history of attempts, ancient and modern, to increase the mammary secretion, and relates the fine results he has obtained with anise. He learned that veterinarians were using anise as a reliable galactagog, and when he was consulted by two women who deplored the lack of sufficient milk for their infants, he recommended them to drink an infusion of anise seed and to apply to the breasts four or five times a day compresses impregnated with the infusion. After five days both women were able to supply all the milk the infants needed. Each had used about seven quarts of the 25 per 1,000 infusion, taking five quarts internally. It was continued for another five days and then suspended, but the secretion of milk remained abundant. The effect is not apparent till from the third to the fifth day.

Books Received

PATHOGENIC MICRO-ORGANISMS, INCLUDING BACTERIA AND PROTOZOA. A Practical Manual for Students, Physicians and Health Officers. By W. H. Park, M.D., assisted by A. W. Williams, M.D. Second Edition, Enlarged and Revised. 168 Illustrations. Cloth. Pp. 556. Price, $3.75. New York: Lea Brothers & Co., 1905.

MATERIA MEDICA AND THERAPEUTICS. An Introduction to the Rational Treatment of Disease. By J. M. Bruce. New and Enlarged Edition. Cloth. Pp. 632. Price, $1.75 net. Chicago: W. T. Keener, 1905.

ORGANOTHERAPY OR TREATMENT BY MEANS OF PREPARATIONS OF VARIOUS ORGANS. By H. B. Shaw, M.D., F.R.C.P. Illustrated. Cloth. Pp. 256. Price, $1.75 net. Chicago: W. T. Keener, 1905.

MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY for 1906. New Revised Edition. Flexible Leather. Pp. 181. New York: William Wood & Co.

DISEASES OF THE STOMACH AND INTESTINES. By B. Reed. Illustrated. Cloth. Pp. 1021. Price, $5.00. New York: E. B. Treat & Co., 1904.